

M ARTISAN

JANUARY · 1951

directory and show

NUMBER

RESIDENTIAL AIR CONDITIONING • WARM AIR HEATING • SHEET METAL CONTRACTING

Get the best for 1951

with



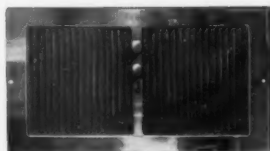
AIR CONTROL REGISTERS & GRILLES

The Air Control Line is your Register Line for 1951, because it is the complete line. There is a style and size in every type of Register or Grille that you may need for any heating installation.

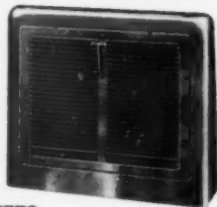
You'll like the styling and trouble-free operation that is yours when you install Air Control Registers and Grilles.

You'll like being able to fill all your requirements at one source, and at a price no higher than ordinary Registers or Grilles.

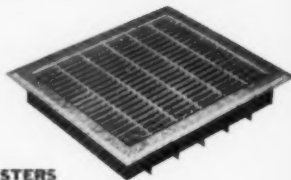
By the way, if you haven't received your copy of the New Air Control No. 51 Pocket Catalog and Engineering Data Book, ask your Air Control jobber for one, or write direct to us. They are free.



AIR CONDITIONING
REGISTERS



GRAVITY REGISTERS



FLOOR REGISTERS

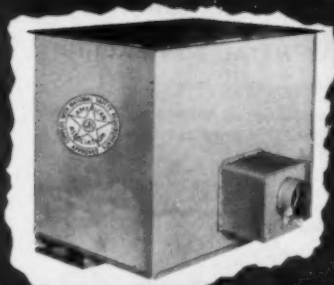


CEILING DIFFUSERS



AIR CONTROL PRODUCTS, INC.
COOPERSVILLE,
MICHIGAN

A John Zink Heat Maker for Any DOMESTIC INSTALLATION

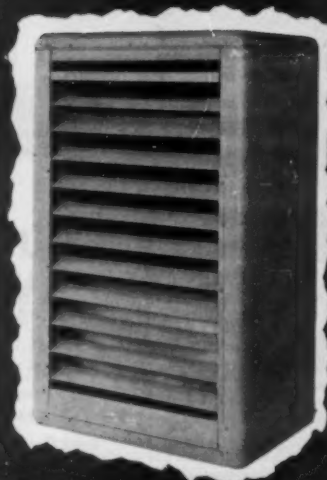


UNIT HEATER Series UHS Fan Type

The John Zink Unit Heater Series UHS Fan Type is a compact, efficient, and reliable heater for domestic installations. It features a built-in fan for rapid circulation of warm air, and a safety shutoff device to prevent overheating. The heater is designed for easy installation and operation.

Heaters are available in sizes from 100 to 1000 Btu per hour. They are designed for use in rooms of various sizes. The heaters are made of heavy-duty metal and are finished with a durable enamel. They are also available in a variety of colors to match your decor.

AGA Approved for Domestic Use
Manufactured in U.S.A.



Central GAS HEATER

Here is a compact, efficient, and reliable heater for domestic installations. It features a built-in fan for rapid circulation of warm air, and a safety shutoff device to prevent overheating. The heater is designed for easy installation and operation.

Heaters are available in sizes from 100 to 1000 Btu per hour. They are designed for use in rooms of various sizes. The heaters are made of heavy-duty metal and are finished with a durable enamel. They are also available in a variety of colors to match your decor.

The John Zink Central Gas Heater is designed for use in rooms of various sizes. It features a built-in fan for rapid circulation of warm air, and a safety shutoff device to prevent overheating.

The John Zink Central Gas Heater is designed for use in rooms of various sizes. It features a built-in fan for rapid circulation of warm air, and a safety shutoff device to prevent overheating.



JOHN ZINK COMPANY

1000 North 10th Street, Minneapolis, Minnesota 55412

Telephone 333-1111

AMERICAN ARTISAN



Member—Audit Bureau of Circulations
Member—Associated Business Publications



RESIDENTIAL AIR CONDITIONING

WARM AIR HEATING

SHEET METAL CONTRACTING

Merged with American Artisan are "Warm Air Heating" and "Furnaces and Sheet Metals"

EDITOR

JOHN E. PETERSON

ASSOCIATE EDITOR

JOHN MCCULLOUGH

ADVERTISING STAFF

WALLACE J. OSBORN
New York City
MUrray Hill 9-8293

ROBERT A. JACK
Cleveland
YEllowstone 2-1540

JAMES D. THOMAS
GEORGE C. CUTLER
Chicago
STate 2-6916

R. PAYNE WETTSTEIN
Los Angeles—DUmkirk 8-2286
San Francisco—YUkon 6-2522
Portland—ATwater 4107

Published monthly by Keeney Publishing Company, 6 N. Michigan Ave., Chicago 2, Ill., U.S.A. Copyright 1951 by Keeney Publishing Company.

Publisher—FRANK P. KEENEY

Manager—CHARLES E. PRICE

Production Manager—L. A. DOYLE

Circulation Director—FRANK S. EASTER

Yearly Subscription Price—U.S. and possessions, \$3.00; Canada, Cuba, Mexico, South America, Central America, \$4.00; Others, \$6.00. Single copies, U. S. and possessions, \$3.50. Back numbers, \$6.00. January, 1951, Directory Issue, \$1.50 per copy. *Change in Address:* Report new and old address to publisher and local post office; deadline, 23rd-25th of preceding month. Entered as second-class matter, July 29, 1952, at the post office at Chicago, Illinois, under the Act of March 3, 1879. Additional entry at Mendota, Illinois.

Founded 1864

JANUARY, 1951

Volume 88, No. 1

AMERICAN ARTISAN, JANUARY, 1951

MANAGEMENT SECTION

NEWS ROUND-UP	99
A YEAR OF RECORDS	103
REVIEW AND PREVIEW	105
LIABILITY FOR HEATING EQUIPMENT ACCIDENTS	107
BE SURE IT'S IN THE AGREEMENT	109
SMCNA COMPILES COMPENSATION RATES	111
HOW SUFFERING BRINGS SALES	113
STOCKPILING FOR DEFENSE	115

RESIDENTIAL AIR CONDITIONING SECTION

RESIDENTIAL PANEL-CONVECTION HEATING SYSTEM	119
HEATING AND AIR CONDITIONING ENGINEERING OFFERED BY MILWAUKEE TECHNICAL SCHOOL	125
WARM AIR UNITS HEAT HUGE CALIFORNIA STEEL MILL	128
BLOWER PACKAGES MEAN EXTRA PROFIT DOLLARS	132
AMERICAN ARTISAN SHOW SECTION	139

SHEET METAL SECTION

AIR CONDITIONING INSURANCE BUILDING REQUIRES 2½ MILLION POUNDS OF METAL	161
COMPARISON OF SUCTION AND PRESSURE RATINGS OF CENTRIFUGAL FANS	164
STEEL AND NATIONAL DEFENSE	167
REID—STATIONARY ROOF TYPE VENTILATOR	172
SHEET METAL SUBCONTRACTING FOR NATIONAL DEFENSE	174

DEPARTMENTS

THE EDITOR'S NOTEBOOK	6
ASSOCIATION ACTIVITIES	179
CONVENTION REPORTS—	
NATIONAL WARM AIR HEATING & AIR CONDITIONING ASSOCIATION	180
NATIONAL HEATING WHOLESALERS ASSOCIATION	184
EQUIPMENT DEVELOPMENTS	189
NEW LITERATURE	230
SALES SENSE BY JACK BEDFORD	236
INDUSTRY ITEMS	238

Why GIVE THE CHIMNEY
SALE AND INSTALLATION
TO SOMEONE ELSE
when you can

ADD BUSINESS

with

MAKE PROFIT

accepted
proved

**Van-Packer
PACKAGED CHIMNEY**

Why hire somebody to build chimneys the expensive, old fashioned way when you can install Van-Packer yourself—saving time and money. And, your buyer gets a more efficient, longer-lasting chimney.

- You install Van-Packer at exact moment it suits you best
- Each package contains complete supplies—nothing else to buy
- Finish chimney installation in 3 hours or less
- Cut chimney cost from 20% to 50%—eliminate waiting and cleanup mess
- Accepted by FHA and national codes
- Proved fire-safe and efficient by Underwriters' Laboratories

Now you can sell and install the chimney, too—add substantial sales volume and profit. When you install Van-Packer you can also guarantee heater performance more positively, eliminate customer complaints.

WHERE DO I BUY IT—See your heating supply or building materials jobber or write direct to address below.

HOW DO I INSTALL IT

Install and level chimney base in floor or ceiling. Cement sections together—apply draw bands. Fit housing to exact roof pitch. Set rain cap. You are all done in 3 man-hours or less.

**Van-Packer
CORPORATION**

A FEW OF THE MANY BUILDERS
CUTTING COSTS WITH
VAN-PACKER CHIMNEYS



Robert Bartlett Bldg. Corp.



H. B. Layne, Contractor



Strausman Construction Co.



Lawrence C. Pearce Co.



Private Homes, Inc.

the editor's notebook

In This Issue

We didn't go to the trouble of counting each word in this JANUARY 1951 DIRECTORY AND SHOW NUMBER, but its editorial pages approach the length of many best sellers. Its value as a year round reference in the warm air heating and sheet metal industry has long been established, substantiated by active sales through the first half of the new year for press over-runs that never quite anticipate the ultimate demand.

The issue features a 16 page SHOW SECTION previewing the 10th International Heating, Ventilating, and Air Conditioning Exposition and a 104 page annually revised DIRECTORY SECTION of manufacturers serving the warm air heating, residential air conditioning, and sheet metal fields.

The SHOW SECTION includes a complete program for the annual meeting of the American Society of Heating and Ventilating Engineers which is being held simultaneously with the exposition in Philadelphia, January 22-26. A list of exhibitors and a layout of Commercial Museum published in this section will serve as a convenient guide for locating exhibitors' booths, personnel in attendance, and products exhibited. Just in case you decide this issue is too much excess baggage to take along for reading material on your trip to the Quaker city, extra copies of the SHOW SECTION will be available at AMERICAN ARTISAN booth No. 12.

The DIRECTORY SECTION provides a convenient cross reference for the buying needs of the industry. Manufacturers are listed under products, under trade names which are



VITROLINER

The Vitroliner Chimney replaces the masonry chimney and is the pioneer in the field of prefabricated chimneys. This lightweight low cost packaged chimney provides attic ventilation, saves valuable floor space and improves heating efficiency. Weighs only ten to fifteen pounds per foot and is designed to fit the individual pitch of the house. Also has a tailor-made roof flashing and flue housing.



The Chimney is built around a vitreous enameled metal flue liner. The liner is encased in a seamless tube of high temperature resistant asbestos insulation. A round aluminum pipe forms the external cover. A flue support at the ceiling is anchored to the joists.

The new Rain Cap with a baffle ring is welded to the Housing Top forming one unit. This improved design acts as a wind baffle and prevents rain from entering the flue in any manner. The new top as seen from the ground level is pleasing to the eye and lends itself to all types of architectural home designs. Vitroliner is a tried and proven quality product, and is approved by the Federal Housing Administration and the National Board of Fire Underwriters.

FEATURES

- LOW INITIAL COST
- SAVES FLOOR SPACE
- FINEST QUALITY MATERIALS
- INSTALLED IN 2 HOURS
- IMPROVES HEATING EFFICIENCY
- PROVIDES ATTIC VENTILATION
- MFD. IN 6", 7", 8" DIAMETERS

FOR FURTHER INFORMATION WRITE TO:
CONDENSATION ENGINEERING CORPORATION
1511 W. POTOMAC AVE., CHICAGO 31, ILL.

the editor's notebook

not identified with the company name, and alphabetically. National associations identified with the industry are listed for the first time, in response to reader request.

In addition to these special sections, the issue contains a full quota of editorial articles, especially selected for their lasting value. AMERICAN ARTISAN readers tell us that the advertising pages also contribute materially to our annual presentation, unifying the whole into a documentation of the warm air heating and sheet metal industry as it enters a new and uncertain year, 1951.

All This and Heaven Too

Do you know...

... how you can get better heating results by using a simplified engineering approach to heating problems

... how you can solve heating problems more quickly and accurately by gaining a better understanding of the fundamental principles of heat losses

... how you can properly size and locate registers and return air intakes to put the heat where it will give the most comfort

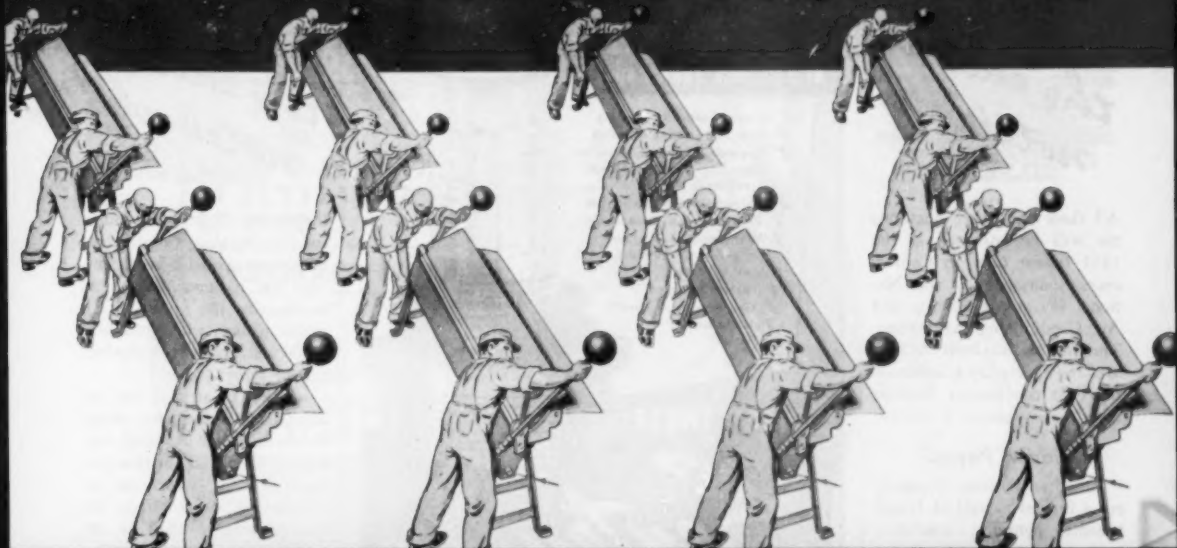
... how you can design and install an efficient perimeter loop system

... how you can design and install a winter air conditioning system that provides *Indoor Comfort* in basementless houses

... how you can give customers more comfort by using automatic controls to their fullest efficiencies

... how you can give customers more comfort by adjusting winter air conditioning systems for continuous air circulation?

...16 MEN AND 8 BRAKES...OR



1 Man and a Lockformer

BETTER LOCKS... FASTER!

One man and a Lockformer makes more Pittsburgh Locks than sixteen men working with eight brakes. And Pittsburghs made on the Lockformer are perfectly uniform... look like the quality work they really are... assemble easier and faster without further prying open by hand.

MULTI-PURPOSE!

Lockformers equipped with extended shafts for Auxiliary Rolls also make Double Seams, Standing Seams, Drive Cleats and Right Angle Flanges... and, if equipped with the Flanger Attachment, are power flangers as well as lock-rolling machines. Lockformers can be set up for as many as three different jobs without change-over!

PROVEN DEPENDABILITY!

There are more than 20,000 Lockformers in use today. Machines delivered over 13 years ago are still giving trouble-free service, day in and day out. Because they cut over-all fabrication costs in half, Lockformers pay for themselves quickly out of the "extra" profits they earn!

THERE IS A LOCKFORMER TO FIT YOUR NEEDS AND YOUR BUDGET
IN LOCKFORMER'S COMPLETE LINE OF LOCK-ROLLING EQUIPMENT



THE LOCKFORMER CO.

4615 WEST ROOSEVELT ROAD • CHICAGO 50, ILLINOIS

the editor's notebook

All these and other questions too will be answered at the 1951 *Indoor Comfort* Conferences sponsored by the National Warm Air Heating and Air Conditioning Association. Turn to ASSOCIATION ACTIVITIES for a complete schedule of the 1951 conferences. Register early — attendance is limited.

Hidden Payroll

American business is paying out a hidden payroll of fringe benefits, pensions, insurance, paid vacations, and similar items equivalent to \$477 a year for every worker, or an addition of 23.7 cents an hour over and above wages paid for time worked.

These figures are the result of a new survey just completed by the United States Chamber of Commerce.

The survey covers 690 companies in all major lines of manufacturing, as well as trade and services, public utilities, and financial institutions. It indicates that nonwage payments making up the hidden payroll amounted to 16 per cent of the business payroll in 1949.

The survey notes that non-wage payments are not included in the wage data reported by government bureaus. As a result, government data give an inadequate measure of the labor costs of doing business. The hourly wage rate has ceased to be a true reflection of the labor costs of operating a business, or of the income and benefits received by workers.

Escalator Clause

As a consequence of rapidly changing prices, escalator clauses are again being inserted in proposals and contracts

AT-A-GLANCE TANK GAUGES

- ✓ Accurate capacity reading
- ✓ Clear, long range visibility
- ✓ Patented, heavy duty plastic dome . . . Shockproof and breakproof
- ✓ No complicated mechanism
- ✓ Durable construction
- ✓ Withstands air pressure in excess of 100 lbs. per sq. inch
- ✓ Factory adjusted
- ✓ Guaranteed leakproof
- ✓ Underwriters' listed



CHECK THESE

Sentry FEATURES
FOR BETTER PERFORMANCE



SENTRY DRAFT CONTROLS

- ✓ Sensitive operating action
- ✓ Completely automatic operation
- ✓ Non-corrosive brass bearings
- ✓ Easy to install . . . quickly!
- ✓ Factory adjusted for accuracy
- ✓ Durable, rugged construction
- ✓ No servicing necessary
- ✓ Full range of sizes from 6" to 12"
- ✓ Underwriters' listed
- ✓ Fully warranted and guaranteed

On guard
24 hours
a day!



Write  for descriptive literature

KRUEGER *Sentry* GAUGES

GREEN BAY • WISCONSIN

the editor's notebook

throughout the building industry. The Building Construction Employers Association of Chicago has recommended to its membership the following clause in cases where members wish to protect themselves against price changes:

In the event the cost of labor, material, or taxes, except income taxes, is increased subsequent to the date of this proposal, and/or subsequent to the date of the contract, the contract amount shall be increased to the extent thereof.

Walter F. Morse writes a column in the *Chicago Sun-Times* in which he concludes, *Let none among us be the first to sneer at the inventor of, say, a pickle fork that lights up in the dark. He could be prying open the door of a Great Discovery with it.*

What They Said

W. C. Schroeder, Chief of Synthetic Fuels Branch, Bureau of Mines, before a joint session of the marketing and refining divisions of the American Petroleum Institute:

Demand for oil once more is increasing far more rapidly than some anticipated. With the armed forces marshaling their strength and civilian requirements continuing to advance, refining and transportation already is feeling the pinch and crude supplies are tightening. Competition for steel has again developed. A cold winter in the populous East would add new urgency to these familiar echoes of the last war.

Should World War III come, civilian rationing of gasoline and fuel oil might be more stringent than in past wars. Further, it again would

1951 JANUARY 1951

-	-	1	2	3	4	5	6
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30	31				

1951 FEBRUARY

-	-	-	-	-	1		
4	5	6	7	8			
11	12	13					
18	19	20					
25	26						

1951 MARCH 1951

-	-	-	-	1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

In these
of Procurement Problems
what can
Wolff Metal Service do for you ?

The answer is WORK . . . real on-the-go effort to help you meet the challenge that metal shortages impose.

In this critical time, the Wolff organization feels a particular sense of responsibility that penetrates far beyond the routine of the ordinary day. Every customer is regarded as a business partner whose interests must be evaluated in terms of available metals.

This calls for intelligent advance planning and unusual co-operation all around. It demands compromise, flexibility and eleventh-hour change. It embraces understanding, disappointment and frequent defeat. It also produces worth while results — the material required to do the job.

If you're the type who hustles and likes hustlers who can take the bumps with you, you'll find you have a lot in common with the staff at Wolff Metal Service. They're on the job every day to get things done for you. Write — or call WA1brook 5-3200.

Carbon Steels, Stainless Steels, Aluminum, Copper, Tinplate, Metal Decorating



*the editor's
notebook*

be necessary to disregard the maximum rate of efficient recovery in drawing upon our petroleum reserves.

Frank Cortright, executive vice president of the National Association of Home Builders, in the NAHB Correlator:

America's building might, when unchained and unhampered by war or controls, is an inspiring force. The capabilities of private builders are readily seen when one examines the record of housing starts. Counting October starts (for which builders laid plans as far back as January) the total for the first ten months of this year reached 1,209,100 . . . topping the previous all time record set in the full year of 1949 of 1,025,000 units.

. . . in 1949, September starts were higher than August, and October starts topped them all. The usual seasonal decline was slow in occurring. But not so in 1950, starts in September reflected the effect of controls and have been on the downgrade since.

And what about public housing? The original goal was set at 810,000 units to be built in six years at a rate of not less than 50,000 and not more than 200,000 units per year. Rising costs and elaborately designed structures have slowed the program to a walk with only 11,000 units started so far, and some of these in reactivated projects. However, planners hope to start 50,000 in the first six months of 1951.

Charles B. Shuman, president of the Illinois Agricultural Association, calling for a drastic reduction in Federal farm support programs and urging farmers to take the lead in steps to cut such non-defense outlays:

Sundstrand OIL BURNER



**PRECISION-BUILT
for
CHAMPION
PERFORMANCE**



ATTRACTIVE

Modern, functional design, with no cumbersome "extras"



DURABLE

Sturdy construction for long wear under any conditions



ECONOMICAL

Built to provide low initial cost and low operating cost



DEPENDABLE

Reputation for trouble-free operation throughout the years



QUIET

Heavy housing and cushion-mounted motor eliminate noise

A complete line, with consumer acceptance and a burner for every job. For full information, write:

SUNDSTRAND ENGINEERING CO.

ROCKFORD, ILLINOIS, U. S. A.

*the editor's
notebook*

. . . we are far removed from the original intent of the legislation. Certainly neither farmers nor Congress contemplated the present huge Federal agricultural bureaucracy, with the expenditure of millions of dollars in administrative costs during high farm income periods.

Lewis H. Brown, chairman of the board, Johns-Manville Corporation, and director, Federal Reserve Bank of New York, before the Mobilization Congress of American Industry:

The reason Stalin has devised his Machiavellian plan to toss a series of Korean war our way is his hope that through deficit financing we will debase our currency and wreck our matchless economy.

Blessing In Disguise

It pays and pays well for a home buyer to make the largest practicable down payment, according to the Housing and Home Finance Agency. Large down payments cut the interest charge and lower the monthly payments. They also may make it possible to pay off the mortgage sooner. For example, a veteran who pays \$2,500 down on a \$10,000 home with a 25-year mortgage will pay \$3,168 less in interest charges than the veteran who pays only \$500 down. The monthly payments on the loans would be \$39.60 and \$50.16, respectively. Likewise a veteran who pays \$2,500 on a \$10,000 home and pays off his mortgage in 15 rather than 25 years will pay \$5,058 less in interest on his loan. The monthly payment would be \$55.50.

You can't help a man up a hill without getting closer to the top yourself.

Daily Tribune

SECOND
SECTION

Nu-Way SALES- PROMOTION SET FOR '51

Nu-Way's policy of sound sales and advertising promotion is being continued in 1951. The Nu-Way campaign will do a bigger job—reach more people more times than ever before. They'll know and want Nu-Way quality now and in the years to come. And should shortages and allocation reduce production of Nu-Way Burners, every effort will be made to maintain quality standards.



NATIONAL ADVERTISING

Smart, informative Nu-Way ads like this one will appear regularly in America's leading home publications. Reaching over six million families, this ad will tell simply and clearly why Nu-Way Oil Burners are the best buy when converting to oil or replacing an outmoded burner.

LOCAL PROMOTION

Nu-Way will offer a host of material for local advertising. Attractively designed newspaper ad mats, window streamers, radio spot announcements, colorful four-page folder, an eight-page booklet, etc., are offered to help bring the entire Nu-Way story right to your local market area.

IF YOU WANT
Dependable Heat



YOU'LL WANT A
Nu-Way
OIL BURNER



POSITIVE AIR CONTROL with dial setting assures all-over heating efficiency... plus 11 other new, improved and exclusive features

NU-WAY gives you economy, efficiency, convenience, cleanliness and smart design—the most for your money!

WHEN YOU CONVERT TO OIL or replace an outmoded burner, see your local heating contractor



Nu-Way CORPORATION
Rock Island, Illinois

'Automatic Oil Heat Exclusively Since 1921'

House & Garden

*Better Homes
and Gardens*

House Beautiful

THE AMERICAN HOME



THE Nu-Way CORPORATION ROCK ISLAND, ILLINOIS

Sold through Jobbers and Distributors
Also Special Applications for Furnace and Boiler Manufacturers

'AUTOMATIC OIL HEAT EXCLUSIVELY SINCE 1921'



*the editor's
notebook*

BLS Index Revision

Basic changes in the method of calculating the BLS Consumers' Price Index present a significant problem to employers who are operating under wage agreements which provide for cost-of-living adjustments. The significant point is that a sharp rise may be expected in the index level as these changes become effective.

Starting this month, the Bureau of Labor Statistics will publish during 1951, both the old and the new (revised) indexes. The revision is a large scale project which is to be completed in 1952. It is expected that the new index will provide a more accurate barometer for use with recent stabilization legislation and in the rapidly increasing trend toward cost-of-living increases in labor agreements. It has been claimed that price increases since the outbreak in Korea have not been reflected in the old index and this precipitated the issue.

A rise quite apart from any question of actual price increases in commodities is expected as the new methods of calculation are incorporated in the index. Although both indexes will be available through 1951 at least, the ultimate abandonment of the old index should be recognized in labor agreements with cost-of-living allowances which extend into 1952.

Our Readers Write . . .

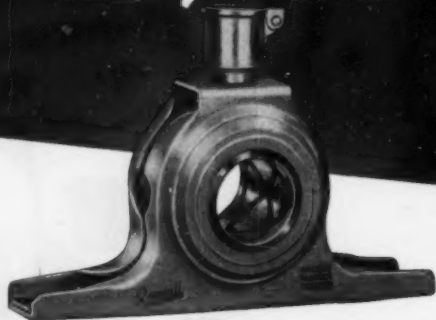
I need my ARTISAN so here is my check.

JOHN L. DYER
Elysburg, Pa.

You can't get sugar and furniture out of a maple tree at the same time.

RANDALL BEARINGS

*last longer
run quieter*



Randall bearings last longer—run quieter because they are specially engineered and precision made for specific applications. Randall's are made from the very finest of materials and employ an exclusive double lubricating feature that assures longer lasting, trouble-free service. Randall bearings, proven dependable by millions of applications, have been accepted as standard equipment by approximately 85% of the leading manufacturers in the air moving industry. Randall bearings are available in a variety of sizes and styles for shaft sizes ranging from 1/2" to 3-15/16". Write today for additional information on Randall bearings or send your requirements. Randall's engineering department is at your service.

PILLOW BLOCKS

BUSHINGS

BAR STOCK

SHEET LUBRICATOR

GRAPHITED BEARINGS

THRUST WASHERS

BARBITTS

SAFETY COLLARS

Randall

RANDALL GRAPHITE BEARINGS, INC.

207 EAST MARKET STREET

LIMA, OHIO

*the editor's
notebook*

Sorry to have neglected this. . . I certainly enjoy the magazine. I am enclosing a \$5 bill. Thanks.

HOWARD M. JUEL
Kimballtown, Iowa.

May I take this opportunity to compliment your editors on a splendid job of serving the heating industry. My only suggestion is that you give more space to warm air heating installations dealing with non-basement type constructions such as is prevalent on the Pacific coast and throughout the southern states.

A. J. HORN
Payne Furnace Div.
Affiliated Gas Equipment, Inc.
Monrovia, Calif.

● Sometimes we can hardly wait to see it in print.—ED.

On page 92 of your September issue I notice the installation illustrated of a water heater and a forced air furnace in the corner of what is apparently a kitchen or utility room.

May I inquire if this is good practice?

My thought is this. It would seem that the power of the blower in the forced air unit would be greater than the draft up the flue. . . and if this is correct it would seem that the products of combustion. . . would be drawn into the furnace and transmitted through the ducts to all heated areas.

When installing forced air heaters in closets it has appeared to me to be necessary to connect a duct from the outside. . . to prevent such difficulty.

E. M. GEORGE
Good Housekeeping Appliance Co., Inc.
Mobile, Ala.



FIELD TYPE "M",
first choice with the leading
manufacturers, jobbers and
dealers of heating equipment.

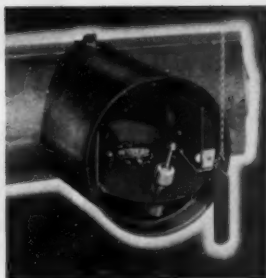
FIELD SCOTTY,
pre-set or adjustable,
first choice with manu-
facturers, jobbers and
dealers of stoves and
ranges.



FIELD RNA-W,
first choice with manufacturers,
jobbers and dealers of hot water
heaters, finest control made for
this purpose.



FUEL SAVING SYSTEM,
newest and finest of damper mo-
tor systems. A profitable door-
opener with hand-fired homes.



FIELD "BAROCHEK",
combination check damper and
barometric draft control. Makes
any hand-fired furnace more ef-
ficient.

field CONTROL DIVISION

of H. D. Conkey & Company, MENDOTA, ILLINOIS

AFFILIATES: { Materials Handling Division — Cranes & Hoists
Conco Building Products, Inc. — Brick, Tile & Stone

See our exhibit at the 10th International Heating & Ventilating Exposition, Commercial Museum, Philadelphia, Jan. 22 to 26, 1951, Space No. 708.

Mueller Climatrol

THE BIG NAME IN HEATING!
— with a complete line designed to get you the business on any job!

Here is the famous Mueller Climatrol line — complete, for any size job... any type of heat... and any of the three popular fuels!

No wonder Mueller Climatrol is the Big Name in Heating! No wonder Mueller dealers are ahead of their competition.

Cash in on this complete line. You sell a name backed by over 94 years of leadership, supported by a consistent program of hard-hitting national advertising. Write for details... **L. J. Mueller Furnace Company, 2030 A W. Oklahoma Avenue, Milwaukee 15, W. Wisconsin.**

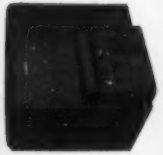
Mueller Climatrol...



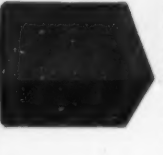
Type 101 Gravity Furnace — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 103 Forced-air Furnace — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 105 Winter Air Conditioner — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 106 Winter Air Conditioner — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 109 Winter Space-heating boiler — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 110 Winter Air Conditioner — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 111 Gravity Furnace — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 104 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 106 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 108 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 109 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 110 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 111 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.



Type 112 Unit Heater — For use with gas, oil, or coal. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203. Four sizes — 105, 201, 202, 203.

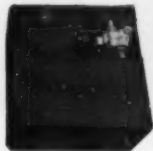


The Big Name in Heating!

FOR
OIL



Type 201 Gravity Furnace—Steel. Pressure-atomizing burner. Four sizes—100, 150, 200, 300 Btu input. Also see types 101, 105, 202.



Type 202 Winter Air Conditioner—Steel. Type 201 burner. Pressure-atomizing unit. Four sizes—100, 150, 200, 300 Btu input.



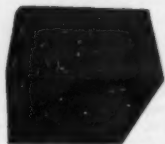
Type 150 Conversion Burner—Pressure-atomizing burner. Fits existing unit. 12" or 20" blast tube length.



Type 400 Conversion Burner—Pressure-atomizing burner. Fits existing unit. 12" or 20" blast tube length.

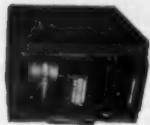


Type 200 Winter Air Conditioner—Steel. Pressure-atomizing burner. Two sizes—100, 150 Btu input.

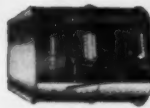


Type 50 Winter Air Conditioner—Steel. Pressure-atomizing burner. Two sizes—100, 150 Btu input.

FOR
COAL



Type 100 Winter Air Conditioner—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.

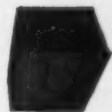


Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.

94th
Anniversary



Type 101 Summer Air Conditioner—Steel. Type 101 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.



Type 100 Gravity Furnace—Steel. Type 100 burner. Pressure-atomizing unit. Two sizes—100, 150 Btu input.

FOR EVERY HOME — FOR ANY FUEL — FOR ANY TYPE OF HEAT...
SINCE 1897

FOR EVERY HOME — FOR ANY FUEL — FOR ANY TYPE OF HEAT...
SINCE 1897

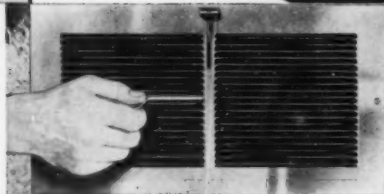
FOR EVERY HOME — FOR ANY FUEL — FOR ANY TYPE OF HEAT...
SINCE 1897

Only H & C gives



No. 75

For Air Conditioning at its best. The only register with the INCOMPARABLE TURNING BLADE VALVE.

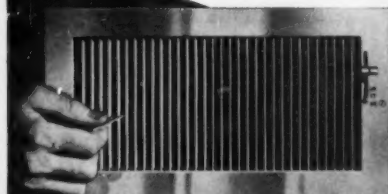


No. 74

A low-cost, high quality Air Conditioning register with Volume Control for balancing the system at the register face if desired.

Baseboard Return Air Intake—has 4" projection, 14 x 10 size adequate for 12" pipe (gravity).

No. 603



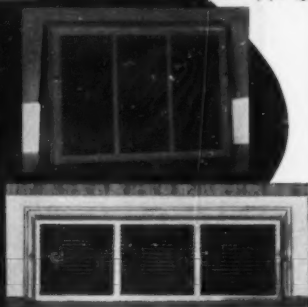
No. 88

Air Conditioning, Multi-shutter Register and Grilles. Adjustable bar face. Sturdily constructed. Available in standard sizes thru 30 x 24.



No. 623

Baseboard Intake for installations where height of baseboard is less than that of intake.

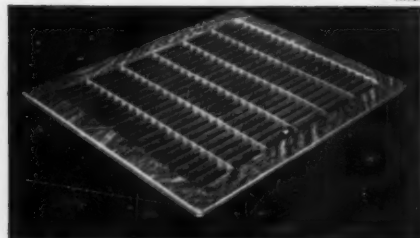


No. 653

Baseboard intake for installations where height exceeds that of intake.

No. 265

"NO-FLEX" Return Air Intake — matches the No. 210. Large free area.



No. 210

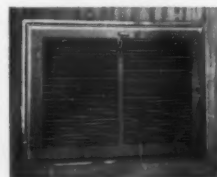
"NO-FLEX" Floor Register — close mesh, exceedingly sturdy, one-piece margin, attractive appearance.



H&C Ceiling Outlet — Neat, trim and efficient. Available in 5 popular sizes.



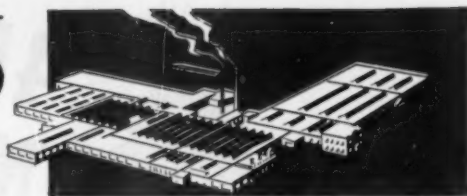
No. 130



No. 330

Sidewall Register — companion to the No. 130.

you all 6



- 1 PERFECT-FUNCTIONING REGISTERS OF THE HIGHEST QUALITY CONSTRUCTION AND WORKMANSHIP KNOWN TO THE INDUSTRY.
- 2 THE IDEAL REGISTER FOR EVERY TYPE OF INSTALLATION available from a single source.
- 3 PACKAGING THAT COUPLES PERFECT PROTECTION TO THE POINT OF USE, WITH MAXIMUM CONVENIENCE TO BOTH JOBBER AND INSTALLER. Each item is individually packed in cartons or wrapped; shipped in tough fibre containers in quantities small enough to be easily handled and shelved, convenient for the trade to buy in case lots.
- 4 A COMPLETE LINE OF FURNACE ACCESSORIES. Manual Furnace Regulator Sets, Damper Regulator Sets, Dampers, Damper Clips and Tips, Furnace Pulleys, Chain and Casing Clips.
- 5 WHOLEHEARTED COOPERATION on the smallest as well as the largest orders.
- 6 PROMPT SHIPPING SERVICE ON MOST STANDARD ITEMS.

We honestly believe that like thousands of others, you, too, will find

**IT'S MORE PROFITABLE, MORE CONVENIENT and MUCH MORE
SATISFACTORY TO DEAL WITH**



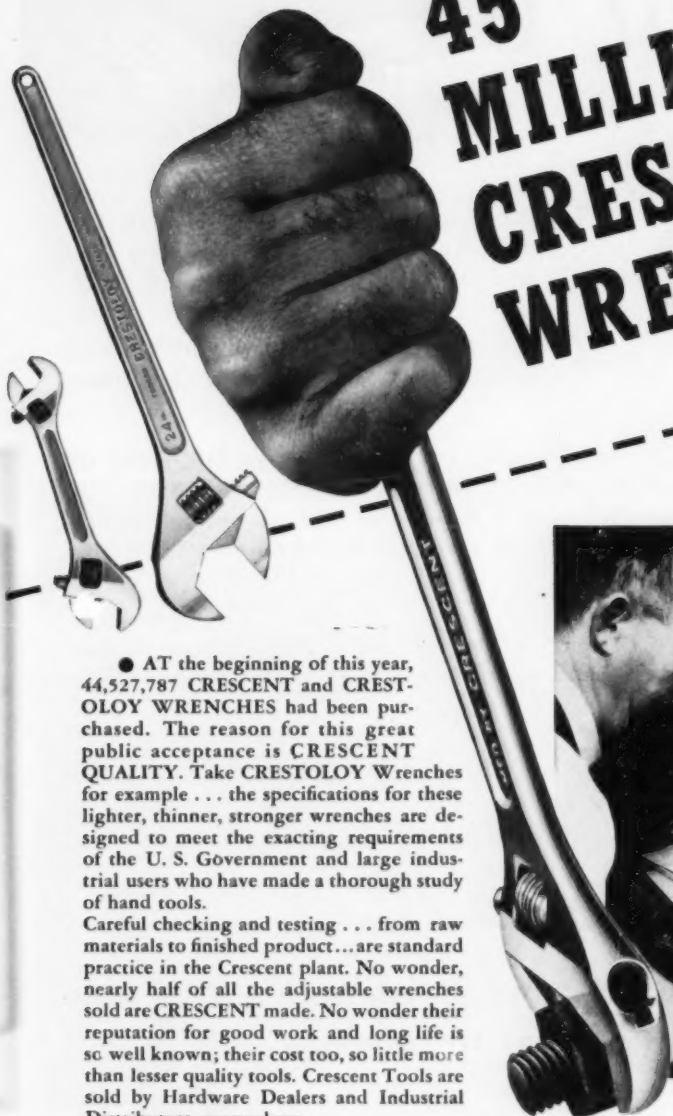
*Current Catalog is No. 51. Write for free copy of our
"Pocket Guide" — 8th Edition.*

HART & COOLEY

MANUFACTURING COMPANY
500 Eighth St., HOLLAND, MICHIGAN

**WORLD'S LARGEST MANUFACTURERS OF
REGISTERS, GRILLES AND FURNACE ACCESSORIES**
IN CANADA: HART & COOLEY MANUFACTURING CO., FORT ERIE, N. ONTARIO

45 MILLION CRESCENT WRENCHES!



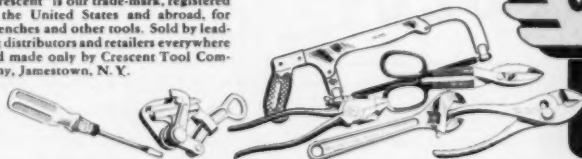
● AT the beginning of this year, 44,527,787 CRESCENT and CRESTOLOY WRENCHES had been purchased. The reason for this great public acceptance is CRESCENT QUALITY. Take CRESTOLOY Wrenches for example . . . the specifications for these lighter, thinner, stronger wrenches are designed to meet the exacting requirements of the U. S. Government and large industrial users who have made a thorough study of hand tools.

Careful checking and testing . . . from raw materials to finished product . . . are standard practice in the Crescent plant. No wonder, nearly half of all the adjustable wrenches sold are CRESCENT made. No wonder their reputation for good work and long life is so well known; their cost too, so little more than lesser quality tools. Crescent Tools are sold by Hardware Dealers and Industrial Distributors everywhere.



CRESCENT TOOL COMPANY, Jamestown, N. Y.

"Crescent" is our trade-mark, registered in the United States and abroad, for wrenches and other tools. Sold by leading distributors and retailers everywhere and made only by Crescent Tool Company, Jamestown, N. Y.



CRESCENT TOOLS

*Sign of the Artisan
Symbol of Excellence*



STEEL FURNACES



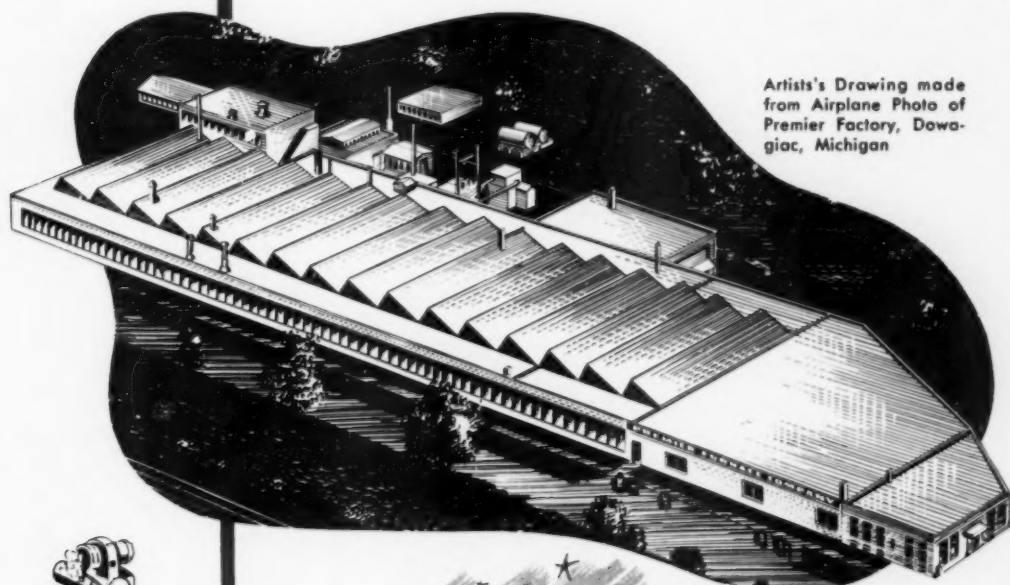
CAST IRON FURNACES



WINTER AIR CONDITIONERS



We sincerely thank the Independent Heating Dealers throughout America who have given us their friendship and their orders during 1950. To all of them we wish another busy and successful year. All of our efforts will be devoted to supplying your requirements as fully and promptly as is possible.



Artists's Drawing made from Airplane Photo of Premier Factory, Dowagiac, Michigan



OIL BURNERS



BLOWERS

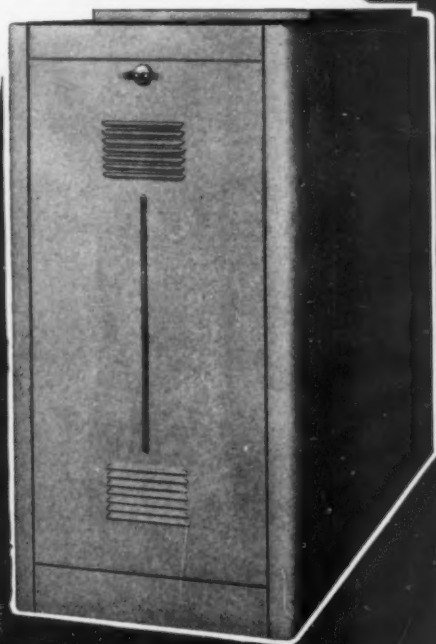
Premier FURNACE COMPANY

DOWAGIAC, MICHIGAN



MAYFLOWER

for 1951



GAS - OIL

COAL

In Design

In Construction

In Performance

The finest air conditioning ever built.



MAYFLOWER AIR-CONDITIONERS

CHICAGO

STEEL PRESS BRAKES

Known throughout the world for their sturdy all steel construction, Chicago Steel Press Brakes—Power Brakes and Hand Brakes—are the result of over 45 years' experience in developing and building these strong dependable machines for the fabrication of Sheet Metals.

Long life and trouble-free service are built into every machine from the Heavy Steel Power Press Brake to the Hand Bending Brakes.



STANDARD HAND BRAKE

The accepted standard in this class of Machinery. Used in the fabrication of Modern metals such as Stainless steel, aluminum alloys and high tensile alloys.



PORTABLE HAND BRAKE

Not a bench machine. It is a Standard brake in every way, an ideal machine for general shop, trade schools, etc. Can be taken along on the job, for air-conditioning, etc.



BOX AND PAN BRAKE

A universal Box and Pan Brake that combines the features of the Universal Brake with the Box and Pan Brake as well as the Standard Hand Brake. Used in manufacture of Electric switch boxes, panel board cabinets, conveyor buckets, tote boxes, Radio Chassis, etc.

DREIS & KRUMP MANUFACTURING CO.

7404 LOOMIS BOULEVARD • CHICAGO 36, ILLINOIS

FOLLOW THE LINE OF LEAST RESISTANCE

GAS FIRED UNITS



Series A
Steel Air Conditioning
Unit with Vestibule and
hinged door.



Series H
Utility Air Conditioning
Unit with Steel heating
element.



Series G
Gravity Furnace. Avail-
able with Steel or Cast
Iron heating element.



No. H-E
Steel-Utility Air
Conditioning Unit
with controls exposed.



No. HC-95-E
Counterflow Unit
for fine slab
perimeter heating.



Series CA
Air Conditioning Unit,
Cast Iron heating
element.



Series A-E
Steel Air Conditioning Unit
with Controls exposed.

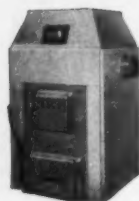


View of Counter-
flow Unit with
blower at top
of cabinet.

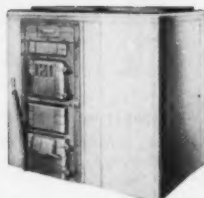
COAL FIRED UNITS



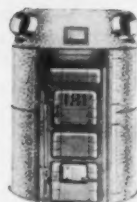
Series No. 700
Gravity Furnace, Steel
heating element.



Series C
Gravity Furnace, Cast Iron
heating element,
also with round casing.



Series AC-F
Air Conditioning Unit, Steel
heating element.



Series No. 600
Gravity Furnace, Steel
heating element.



Series C
Pipeless Furnace, Cast
Iron heating element.

Coal fired units can be converted to Automatic Firing with either Luxaire Conversion Gas Burner or Conversion Oil Burner.
Gravity Furnaces can be converted to Forced Air heating by Addition of Luxaire Blower-Filter Unit.

FOLLOW THE *Luxaire* LINE!

for ANY Fuel
GAS • OIL • COAL

with
CAST IRON or STEEL
Heating Elements

OIL FIRED UNITS



Series B
Gun, Oil Air Conditioning
Unit. Steel heating element.



Series OG
Gun, Oil Gravity Fur-
nace. Steel heating
element.



Series OH
Gun, Oil Utility
Air Conditioning
Unit. Steel heating
element.



Series VA
Vaporizing Oil Air Con-
ditioning Unit. Steel
Heating element.



Series VH
Vaporizing Oil Utility
Air Conditioning Unit.
Steel heating element.



No. VHC-75-E
Counterflow Unit
for low slab
perimeter heating.



Series VC
Vaporizing Oil Grav-
ity Furnace. Steel
heating element.

When a homeowner wants a gas-fired, steel, gravity furnace, don't try to sell him something different. Sell him a Luxaire unit of the exact type that Mr. Homeowner prefers!

When an architect wants a gas-fired, cast iron, air conditioning unit, don't try to sell him something different. Sell him a Luxaire unit of the exact type that Mr. Architect prefers.

When a builder wants oil-fired Counterflow Units for Perimeter heating installations in his basementless houses, don't try to sell him something different. Sell him a Luxaire unit

of the exact type that Mr. Builder prefers.

If buyers want Cast Iron or Steel, coal-fired, gravity furnaces or air conditioning units — gun or vaporizing oil fired units — furnaces which can be converted from oil to gas, or vice versa, at any time, DON'T set up buying resistance by trying to talk them into buying something which you happen to have, BUT which they do not want!

Follow the Line of Least Resistance! Sell the complete Luxaire Line! You will have exactly the type and kind of heating unit that furnace buyers want to purchase.

THE *Luxaire* C. A. OLSEN MANUFACTURING COMPANY • ELYRIA, OHIO
HEATING & AIR CONDITIONING UNITS

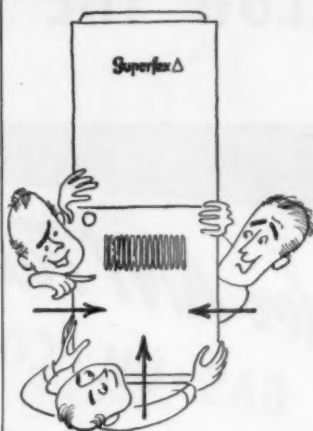
Here's an installation man's dream... or the new Lo-Hi-



NO HEIGHT PROBLEM...only 58" high... perfect for closet, utility room or basement! It's cut in size—but most certainly not in efficiency!



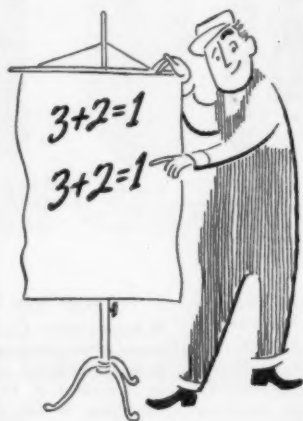
NO CUTTING OF CASINGS! Has every possible installation problem licked from the start with its 12 different connection combinations built-in at the factory!



LOOK! Choice of left-hand, right-hand or bottom air return! When side connection is made, that side plate becomes a solid metal bottom! Filter racks built in.



ALL WORKING PARTS—controls, burners, filter racks and draft diverter—accessible from the front! Encased in durable steel and finished in attractive baked enamel.



THE 3-STAGE FIRE plus the 2-speed blower gives you 2 furnaces in one! A cold-weather furnace and mild-weather furnace, all in one! (Single stage burner with single speed blower also available.)

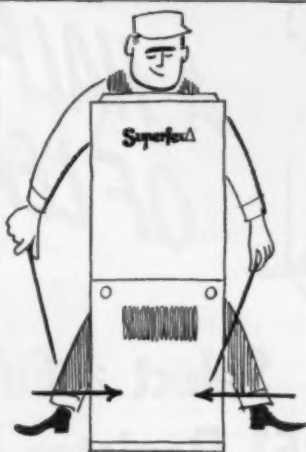


AND MOST COMPETITIVELY PRICED! All these new amazing features, plus more (write us for them) at a price your customers won't kick about. Research did it!

Boy Furnace with the right kind of "connections"! BY PERF



LOOK AGAIN! A special flue stub plate adapts to either top or back flue opening! Has a built-in draft diverter!



WHAT'S MORE, the gas connection, as well as the return air duct, can be made from either side! What could be handier?



TWO MEN can handle the new Lo-Hi-Boy easily . . . even down twisting stairs! Packaged in one unit, it's all set for any connection-combination desired!



IDEAL FOR SMALL HOMES, apartments, offices, shops, schools, churches. Designed for any type gas—natural, mfd. or mixed! 70,000 BTU input.

**PERFECTION
STOVE COMPANY'S
sensational,
new gas
Superfex
Lo-Hi-Boy!**



Here it is in its formal dress, complete with special "boot" for basement installation!

PERFECTION STOVE CO.
7234-A Platt Avenue
Cleveland 4, Ohio

Write to us for further information on the "twelve connection combinations"!



**A HALF-CENTURY
OF LEADERSHIP**

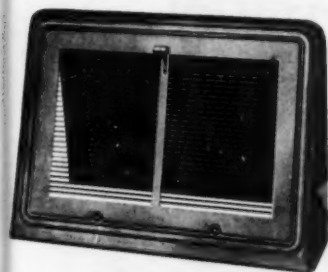
Select a Full-line Producer For Your 1951 Register Requirements

For the finest residential and commercial installations — the kind that satisfy customers and build your reputation — standardize exclusively on U.S. Registers and Grilles for all your needs. You simplify inventory and warehousing . . . save estimating time . . . save the paper work of multiple orders, multiple shipments, multiple records, bookkeeping, and check writing.

You can be sure — on gravity, blower systems, or complete air-conditioning — that the U. S. Registers designed for each

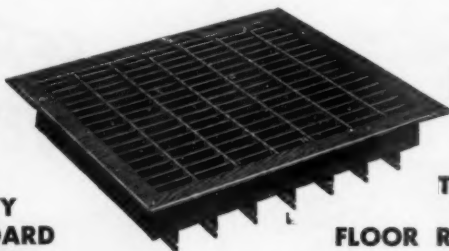
type of installation will match up without misfit eye-sores. Best of all, you can be sure **every** U.S. Register you install has been smartly designed, properly engineered, and carefully produced.

U.S. is no Johnny-come-lately in the business. For 50 years this company has been a sound and stabilizing influence in the heating industry — originating many of the new developments, developing more efficient production methods. For '51, as always, U.S. will set the pace.



No. 40
U. S.
GRAVITY
BASEBOARD
REGISTERS

Neatest, Most Efficient of all Baseboard Gravity Registers.



No. 400
U. S.
TRUSSTEEL
FLOOR REGISTERS

New Close Mesh Style — Mesh 7/16 x 1 15/16 — Strongest and most practical of all floor registers.

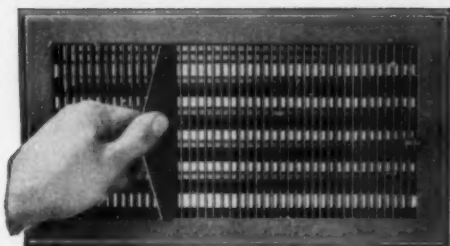
No. 405

U. S. Trussteel Face — New Close Mesh Style — 7/16 x 1 15/16 — Strongest of all faces.

**ON DISPLAY
BOOTH 733
INTERNATIONAL SHOW
PHILADELPHIA**

**UNITED STATES
BATTLE CREEK**

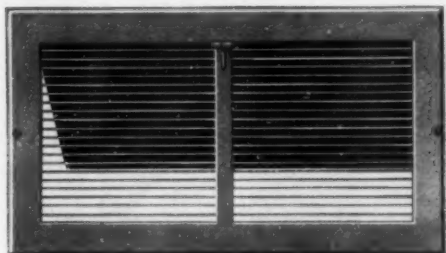
**BUY U.S.
GET THE BEST**



No. 256

U. S. AIR-CONDITIONING REGISTER

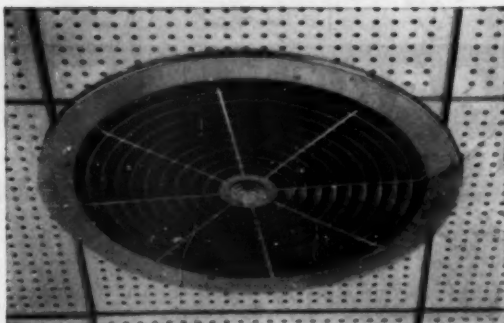
The Most Popular and Practical 4-Way Flow Register made. Ask any high grade consulting Air-Conditioning Engineer. Costs no more than cheap imitations.



No. 153

U. S. AIR-CONDITIONING REGISTER

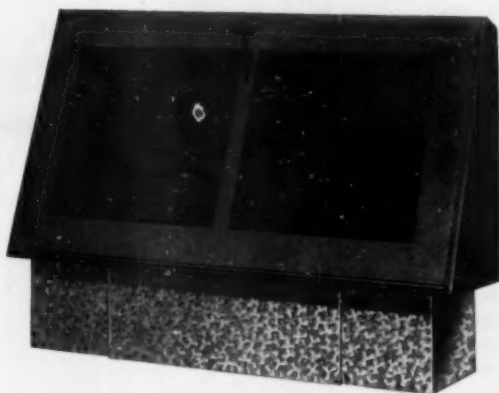
Positively Leads the Industry with quality that is unequaled by any Single Valve A-C Register. Try them. Costs no more than poorly made imitations.



No. 500

U. S. ROUND CEILING OUTLET

Sets the Pace for Lowest Price and Highest Degree of Efficiency. Takes the "Fringe" out of Ceiling Outlet Costs — made possible by sensible production procedure and standardized sizes.



No. 165 3-3/4"

**U. S. (Out-of-Wall)
AIR-CONDITIONING REGISTER**

Available with or without Heads and with Baseboard Intakes to Match. Dodges old House Installation Troubles — Avoids cutting walls, floors, carpets, rugs, sills and joists. So Easy to Install. Ideal for Perimeter Heating.

REGISTER COMPANY
MICHIGAN

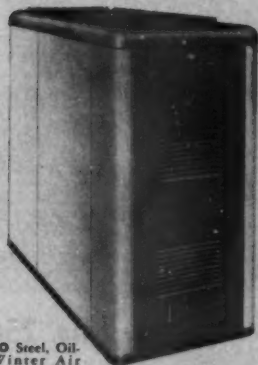
BRANCHES: Minneapolis, Kansas City,
Albany



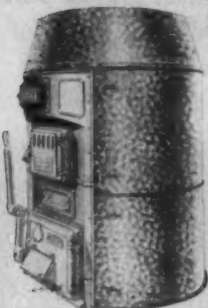
BACKED BY YEARS OF CONSUMER ACCEPTANCE



SERIES 154
Cast Iron, Coal-Fired Winter Air
Conditioner.



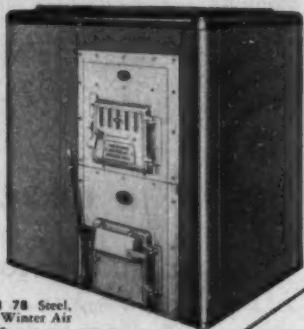
SERIES 80 Steel, Oil-Fired Winter Air
Conditioner.



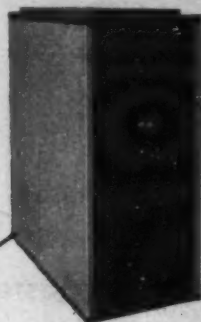
SERIES 15 Cast Iron,
Coal-Fired Gravity
Furnace.



An extensive line of
new models to be
announced.



SERIES 70 Steel,
Coal-Fired Winter Air
Conditioner.



SERIES 71 Steel
Coal-Fired Gravity
Furnace.



SERIES 85 Steel, Gas-Fired Air Conditioner
or Gravity Furnace.



* **Designed** and engineered by a company in the heating field for thirty-six years. Backed up by the production "know how" of experience. Write for descriptive folder.

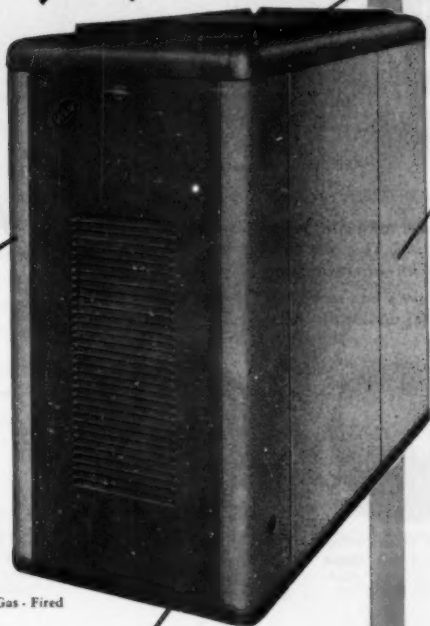


THE RYBOLT HEATER CO.

COAL • GAS • OIL • COAL

*** Designed To Fit Every
Home Heating Requirement**

Rybolt's **right—**



SERIES RC Cast Iron, Gas - Fired
Winter Air Conditioner.

Rybolt is the right answer to most heating problems confronted by both the contractor and consumer today. There is a **Rybolt** furnace to fit your particular need.

Engineered to meet the most rigid specifications and styled to please the most discriminating purchaser. **Rybolt** heating units are tops! There is a **Rybolt** heating unit to fit — whether gas, oil or coal fired. Only the best of materials are used thus assuring the owner years of satisfactory performance. This manufacturing care makes certain for the minimum of repair and maintenance for satisfactory operation. **Rybolt** furnaces are sized for almost any given floor area thus overcoming erection problems. **Rybolt** furnaces are built for economy of performance, dependability, attractiveness.

Fully representative of the Rybolt quality standard it's a new cast iron gas-fired winter air conditioner. It's a deluxe heating unit engineered and built for long life and lasting heating satisfaction. The cast iron heating sections are independently controlled, providing unusual flexibility of heating service. It's an unusually handsome unit, with its dignified design and attractive two-tone gray baked enamel finish. Comes in four sizes, 110,000 BTU, 130,000 BTU, 165,000 BTU and 195,000 BTU. Write for descriptive folder.

An emblem of quality — Rybolt dealers are proud to show this **Rybolt** decal as illustrated above. It identifies them with a product backed by heating "know how". Available to all **Rybolt** dealers upon request.



615 MILLER ST. ASHLAND, OHIO

• GAS • OIL • COAL • GAS • OIL

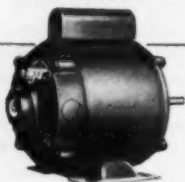
Century 1/8 TO 3/4 H. P. MOTORS

Choose From These Many Types
to Fit Your Job

**HEAVY-DUTY for Industrial and
Appliance Use**

From Century's wide range of types and sizes, there's a proper motor for all popular applications. You can be confident that the right Century motor will assure a long life of satisfactory performance.

Shown here are examples of Century's line of **FRACTIONAL HORSEPOWER** motors—ruggedly built for smooth, quiet operation, with a remarkable freedom from vibration



TYPE CSH—Capacitor Start Induction Single Phase Motor suitable where high starting torque and normal starting current is satisfactory.



TYPE SP—Split Phase Induction, Rigid Base, Single Phase Motors suitable for light starting duty.



TYPE SC—Squirrel Cage Polyphase Motor built in fractional sizes for all torque requirements.



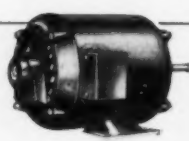
JET PUMP MOTOR—Capacitor Start Single Phase Motor available in sizes for practically every jet pump application.



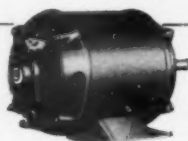
TYPE SP—Split Phase Induction, Cushion Base, for quiet operation.



OIL BURNER MOTOR especially designed for this service. Compact, rugged; smooth, quiet starting and running.



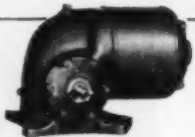
TYPE RS—Repulsion Start Induction Single Phase Brush Lifting Motor suitable for applications requiring high starting torque and low starting current.



TYPE DM—Direct Current built in sizes and ratings for applications where direct current is available or its use desirable.



UNIT HEATER MOTOR provides smooth, quiet performance throughout a long service life.



GEAR MOTOR, compact, rugged, ball bearing equipped, for your high torque, slow speed requirements.

The complete line of Century motors includes a wide range of types and kinds, from 1/8 to 400 horsepower. They are available in open rated, splash proof, totally enclosed fan cooled and explosion proof frames.

Specify Century motors for all your electric power requirements.



CENTURY ELECTRIC CO.

1806 Pine Street
St. Louis 3, Missouri

-482

OFFICES AND STOCK POINTS IN PRINCIPAL CITIES



Choose From These Many Types
To Fit Your Job

DEPENDABLE CONSTRUCTION... Plus

PROPER SELECTION MINIMIZE SHUTDOWNS

It's easy to select the proper electric motor for your job from Century's complete line—from 1/6 to 400 horsepower. A wide range of types and kinds are available to satisfy all popular requirements. They are carefully designed, built and tested to assure maximum performance throughout their long life.

Here are examples of Century's line of INTEGRAL HORSEPOWER motors.

Polyphase

TYPE SC—Open Drip proof General Purpose Motor. Meets the needs of most installations where operating conditions are relatively clean and dry.

TYPE SC—Splash proof. Supplies protection where plants must be washed down. Keeps out all falling or splashing liquids—rain, snow, sleet, etc.

TYPE SC—Totally Enclosed Fan Cooled. Protects against dusts, mist, oil, fog. Inner frame protects vital parts of the motor, seals out harmful matter.

TYPE SC—Explosion proof. Protects life and property in atmospheres charged with explosive dusts or gases.

TYPE SR—Wound Rotor. Open Construction. Ideal for applications requiring low starting current with high starting torque, reversing or adjustable speed.

TYPE SR—Wound Rotor Splash proof. Same electrical characteristics as motor shown above. In addition, gives adequate protection against falling and splashing liquids.

Single Phase

TYPE RS—Repulsion Start Induction, Open Construction, Single Phase Brush Lifting Motor. Combines high starting torque with low starting current.



TYPE RS—Splash proof. Same advantages as open construction, plus protection against splashing and falling liquids.

TYPE CSH—Capacitor Start Induction, Single Phase Motor. Suitable when high starting torque with normal starting current is satisfactory.

TYPE CSH—Splash proof. Same advantages as motor shown above, plus protection against falling and splashing liquids.

Direct Current

TYPE DN—Direct Current Motors. Suitable for use where direct current is available, or its use desirable.

TYPE DN—Direct Current, Splash proof.

TYPE SY—Synchronous. Suitable for continuous operation at a uniform load for power factor correction.



In addition to a complete line of integral horsepower motors, Century offers fractional horsepower motors, gear motors, generators, AC and DC motor generator sets.

For a long life of satisfactory performance, specify Century motors for all your electric power requirements.

CENTURY ELECTRIC COMPANY, 1806 Pine Street, St. Louis 3, Missouri • Offices and Stock Points in Principal Cities

CHAR-GALE'S Package Program for '51

SAVES LABOR

SAVES MONEY

51

SAVES TIME

SAVES SPACE

Ever since we, at Char-Gale, introduced our line of packaged fittings, the response has been spectacular . . . even overwhelming. It started with our packaged fittings, then packaged joist panning, next the universal plenum, and finally project packs. In each case, your quick acceptance of the product proved that it filled a real need. That is no more than we had expected. And that is why we shall continue to give you a complete line of low-cost packaged fittings, designed to save you time, effort and money on every job in 1951.

CHAR-GALE'S COMPLETE LINE INCLUDES:

STEEL REGISTERS

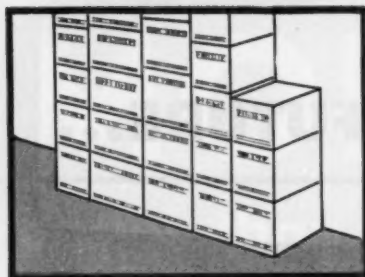
A new and improved
register design

HUMIDIFIERS

Easier to install,
built to last longer

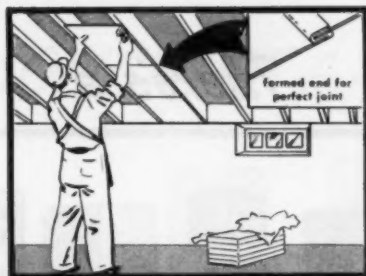
CHAR-GALE

MANUFACTURING
CO.



SPACE-SAVING PACKAGED FITTINGS

Your fittings come in easy-to-handle packages when you get them from Char-Gale! Say goodbye to jumbled bins, damaged fittings and wasted storage space. Compact cartons provide a flexible storage system. No sorting and resorting.



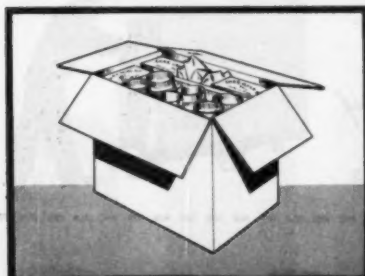
CUT-TO-SIZE JOIST PANNING

Neatly packaged Char-Gale aluminum joist panning is lightweight and easy to install. Each sheet is cut to size, with the end already formed for snug, easy fitting. A sure method of saving both time and sheet metal.



READY-MADE UNIVERSAL PLENUM

Because it is pre-formed, the Char-Gale universal plenum can be trimmed to size, assembled and installed, all *on the job*, in a matter of minutes! Each plenum is individually packaged; instructions and screws included.



"CUSTOM-PACKED" PROJECT PACKS

All the fittings needed for each job are "custom-packed" to your specifications, ready for final assembly, in Char-Gale Project Packs. You know you're getting everything you need without any waste. A sure way to cut costs.

If you have not yet investigated the possibilities of the Char-Gale Package Program for '51, do so today. It will solve many of your problems.

Write, Wire or Phone Us—Or Ask Your Jobber.

BUILD FOR YOUR FUTURE...

*More SALES
Bigger PROFITS*

There's a

**OIL
FIRED
UNITS**



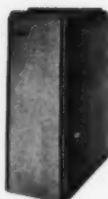
Series P
Gun, Oil Air Conditioning
Unit. Steel heating element.



Series PW
Gun, Oil, Gravity Fur-
nace. Steel heating ele-
ment.



Series PH
Oil Fired, Utility
Conditioning Unit.
Steel heating element.



Series VL
Vaporizing Oil, Air
Conditioning Unit.
Steel heating element.



Series VU
Vaporizing Oil, Util-
ity Air Conditioning
Unit. Steel heating
element.



Series VW
Vaporizing Oil, Grav-
ity Furnace. Steel
heating element.



No. VUC-75-E
Counterflow Unit
for floor slab
perimeter heating.

MONCRIEF **SUREFIT** CARTON-PACKED FITTINGS

EASIER TO SELL...

EASIER TO HANDLE...

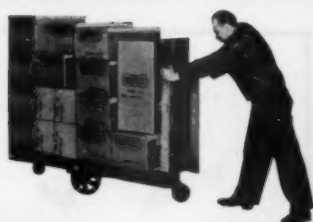
EASIER TO STOCK...

Save Time

Save Space

Save Money

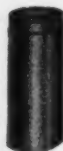
BUY 'EM BY THE CARTON



also

**MONCRIEF FURNACE PIPE
ELBOWS and ANGLES...**

BUY 'EM BY THE BUNDLE



Bundled Furnace Pipe
3" to 24"

Bundled Angles
5" to 12"
Bundled Elbows
3" to 12"



You'll find selling MONCRIEF

easier than competing against it

MONCRIEF for ANY Heating Requirement

GAS FIRED UNITS



Series L
Steel Air Conditioning
Unit with Vestibule and
hinged door.



Series U
Utility Air Conditioning
Unit with heating
element.



Series W
Gravity Furnace
available with Steel
or Cast iron heating
element.



Series CL
Air Conditioning Unit.
Cast iron heating
element.



Series UE
Steel-Utility Air
Conditioning Unit
with controls
exposed.



Series L-E
Steel Air Conditioning
Unit with Controls
exposed.



No. UC-95-E
Counterflow Unit
for floor slab
perimeter heating.



View of Counter-
flow Unit
at top of
cabinet.

When you make your decision for '51, you can plan the future for '61, for '71 and thereafter. You can plan wisely too—because with Moncrief you can rely on a top-notch line of profit-making equipment that fits the needs for practically any home heating installation.

Moncrief builds a most complete, versatile line. Gas Fired Furnaces and Air Conditioning Units with either steel or cast iron heating elements . . . Oil Fired Units with Gun type and Pressure Vaporizing Burners . . . Coal Fired Gravity Furnaces and Air Conditioning Units with either Cast Iron or Steel heating elements . . . Gas or Oil fired Counterflow Units for slab floor, Perimeter heating installations.

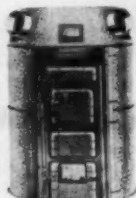
Also—many Moncrief models are built and approved for either gas or oil firing. Equal heating efficiency is obtained with either fuel.

Your Moncrief jobber will be happy to show you how Moncrief can be your profit-making line for '51-'61-'71.

COAL FIRED UNITS



Series C
Gravity Furnace. Cast
iron heating element.
Available also with Round
Casting.



Series No. 600
Gravity Furnace.
Steel heating element.



Series No. 700
Gravity Furnace.
Steel heating element.



Series AC-F
Air Conditioning Unit.
Steel heating element.



Series C
Pipeless Furnace. Cast
iron heating element.

THE HENRY FURNACE COMPANY • Medina, Ohio

HEATING AND AIR CONDITIONING UNITS

MONCRIEF

FURNACE PIPE AND FITTINGS

AMERICAN-Standard

First in heating...first in plumbing

The WINTERWAY

Oil Fired

WINTER AIR CONDITIONER

...just what you need
for those remodeling jobs

■ This new basement type winter air conditioner from the Sunbeam line by American-Standard is as handsome and compact as it is efficient.

Available in two sizes—100,000 and 120,000 Btu capacity at register—to meet the needs of small and medium size homes, the Winterway can easily become one of your best sellers.

Its steel heating element consists of a wrap-around type, correctly baffled radiator that completely encircles sturdy shell. Flue gases enter full height opening into radiators, to assure faster heating and eliminate hot and cold spots.

Easily Handled . . . Quickly Installed

When furnished with special flange type Arcoflame Oil Burner, controls and master control switch are prewired for your convenience. Expertly designed universal connection in flue pipe assembly permits either right or left hand outlet. Side jacket panels have knock-outs to accommodate the flue pipe. Greater flexibility of installation and shorter flue pipes are possible. A solid base pan with rigid channel supports and leveling screws facilitates installation on uneven floors and reduces problems of leakage.

For complete details of the Winterway Winter Air Conditioner, and information about other Sunbeam warm air units, contact your Wholesale Distributor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

LOOK FOR THIS



MARK OF MERIT



As an American-Standard retailer, you can offer your customers the convenience of time payments through the American-Standard Finance Plan. Under existing regulations, heating equipment for modernization can be sold for as little as 10% down and on terms up to 30 months. These terms, being more liberal than those generally prevailing on other major purchase items, serve as an inducement to home-owners to go ahead with permanent home improvements.

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEAT • DETROIT LUBRICATOR • Kewanee Boilers • ROSS HEATER • TONAWANDA IRON

NIAGARA PRESENTS

Multi-Drive Power Table

for BEADING
CRIMPING
BURRING
TURNING

WIRING

FLANGING

ELBOW-

EDGING

FURNACE-

COLLAR

EDGING

AND A MULTITUDE OF
OTHER SHEET METAL
OPERATIONS

- MORE PRODUCTION WITH POWER

Low cost hand operated bench machines are instantly converted to power machines that will give many times the output per hour for each machine.

- FREES BOTH HANDS FOR WORK

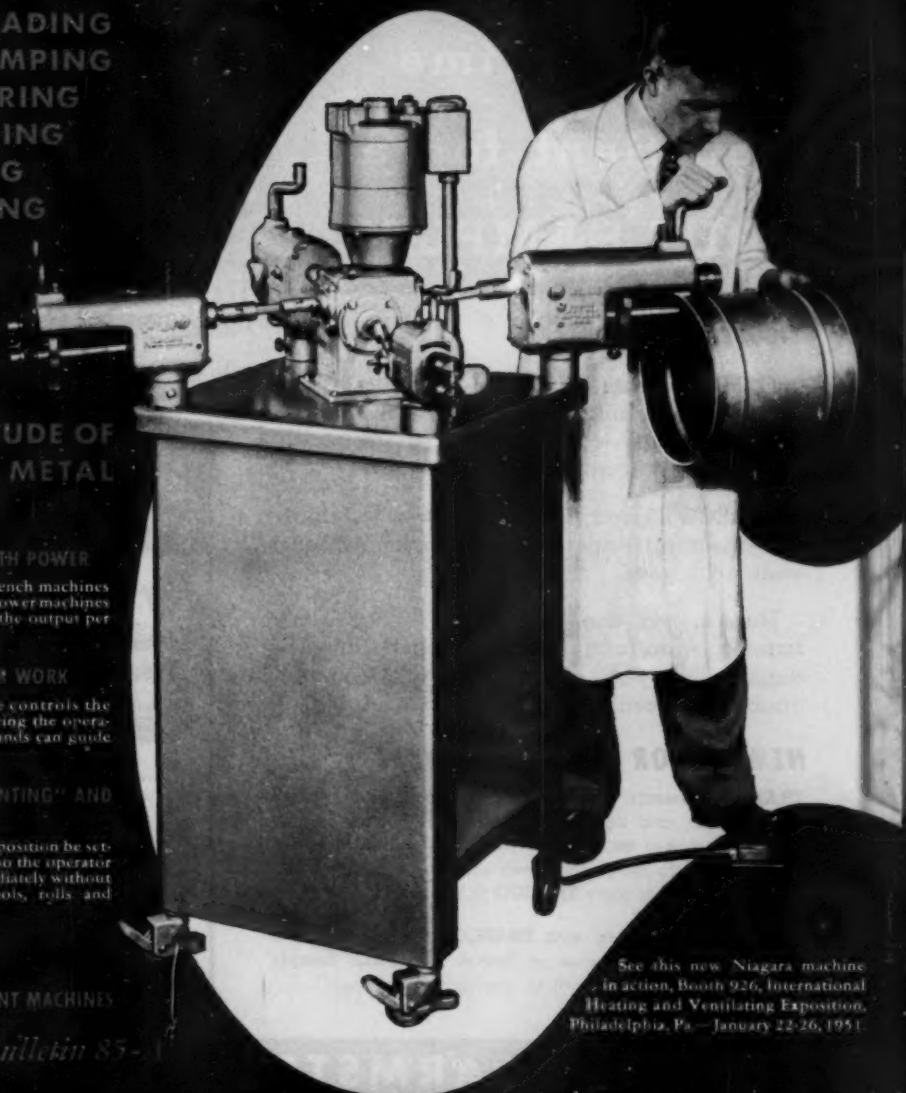
The electric foot treadle controls the operation of the rolls, freeing the operator's arms so that both hands can guide the work.

- ELIMINATES "TOOL HUNTING" AND "TOOL SETTING"

We recommend that each position be set-up for a certain operation so the operator can start to WORK immediately without wasting time hunting tools, rolls and gages.

- PORTABLE — COMPACT

- MOTORIZES YOUR PRESENT MACHINES



See this new Niagara machine
in action, Booth 926, International
Heating and Ventilating Exposition,
Philadelphia, Pa.—January 22-26, 1951.

Write for New Bulletin 85-A

NIAGARA MACHINE & TOOL WORKS • BUFFALO 11, N. Y.

America's Most Complete Line Presses, Shears, Machines and Tools for Sheet Metal Work

DISTRICT OFFICES: DETROIT • CLEVELAND • NEW YORK

If You Haven't as yet
Tried **THARCO**
SUPERIORITY
it's High Time
You Sent for a
FREE SAMPLE*

THARCO will not shrink, crack or
check — positive guarantee of a
leak-free furnace.



THARCO's different!

THARCO Seals BOTH sides of the joint gas-tight, smoke-tight . . . yet it's resilient enough to care for all normal expansion and contraction.

THARCO's good for temperatures far above average furnace operation . . . and that applies year after year.

There's only **one THARCO** . . . the secret formula Armstrong Compound that can't be duplicated for ease of application and long-time, trouble-free results.

NEW COLOR NOW AVAILABLE

THARCO Asbestos Furnace Cement **now** comes in two colors: black and light gray. The light gray is cleaner to handle, makes for a neater job. Both colors packaged in one-pound to 350-pound metal containers ready to use. Better wholesalers carry **THARCO** in stock.

* If you're not familiar with **THARCO's** superiority, try it at our expense. Write us at Detroit, and **FREE Sample** of either color will be sent to you promptly.

TRADE MARK
OF
EXCEPTIONAL
QUALITY



The ARMSTRONG COMPANY

241 So. Post St.
Detroit 17

4065 So. LaSalle St.
Chicago 9

2411 Swiss Ave.
Dallas 1

Richmond
California

Other Famous ARMSTRONG Products

Rely-On Caulking Compound



This caulking compound is "tops" for sealing joints in any type construction — for filling in between furnace and basement floor. Adheres to practically any surface — wood, brick, glass, stone, tile, cement, metals or plaster. An E-L-A-S-T-I-C material that does not crack or chip off in service. Applied with caulking gun. Cartridge, quart and gallon sizes available.

"33" Glazing Compound



An E-L-A-S-T-I-C glazing compound that works equally well on wood or metal sash. Unlike putty, "33" won't crack, chip or crumble. It retains a weather-proof bond years longer. Also ideal for setting plumbing fixtures and scores of other uses. Packed in one-pound, 2, 5, and 10-pound metal containers.

royal jet-flow... fits any pocketbook



royal jet-flow... safe with children



royal jet-flow... fits any style of decoration



royal jet-flow... does not interfere with furniture placement

royal jet-flow... is easy to install





with the

royal jet-flow



royal mid-jet

*You can have a
heating line with more
sales-appeal, more dollar profits
than any on market.*

*Dealerships are open
in some areas.*

*Write or phone
collect today.*

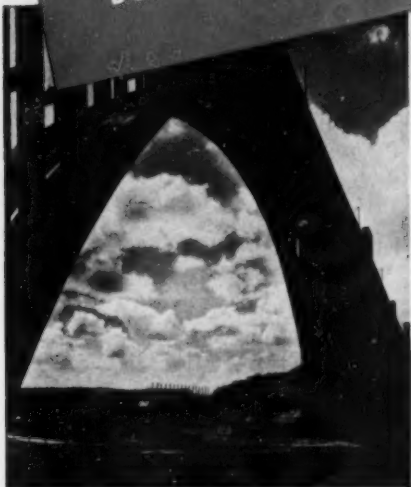
Alhambra, California

Phone CUmberland 3-2117



STRUCTURES

Built for Posterity



The Westinghouse Memorial Bridge in Pittsburgh is protected for all time from seepage and resulting erosion, with Majestic Flashing.

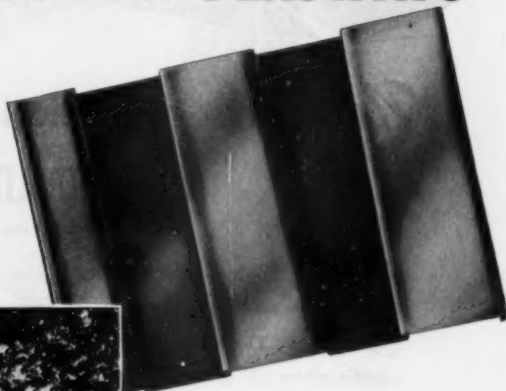
Demand-

HUSSEY

MAJESTIC

3-Way Thru Wall

COPPER FLASHING



The Archives Building, one of Washington's finest structures, is an example of the important, permanent structures entrusted to Majestic 3-Way Thru Wall Flashing for seepage protection.

Because of its exclusive three-way bond, Majestic Copper Flashing effectively resists stresses and strains in *every* direction . . . provides *permanent* protection against seepage, leakage and erosion. Its patented keyed surfaces, combined with the cutback design, form an everlasting grip on the mortar.

Made from solid 16 oz. corrosion-proof Hussey Copper, Majestic Flashing is interlocking, and easily fabricated for fast installation.

7 Convenient Warehouses to Serve You Promptly!

PITTSBURGH

2850 Second Avenue

CLEVELAND

5318 St. Clair Avenue

CHICAGO

3900 N. Elston Avenue

CINCINNATI
424 Commercial Square

NEW YORK

140 Sixth Avenue

ST. LOUIS

1620 Delmar Boulevard

PHILADELPHIA

1632 Fairmount Avenue

HUSSEY

C. G. HUSSEY & CO.

(Division of Copper Range Co.)

Rolling Mills and General Offices: Pittsburgh 19, Pa.

Hussey Warehouses carry stocks of Copper and Brass Products for Prompt Shipment



New furnace insulation method saves steel!

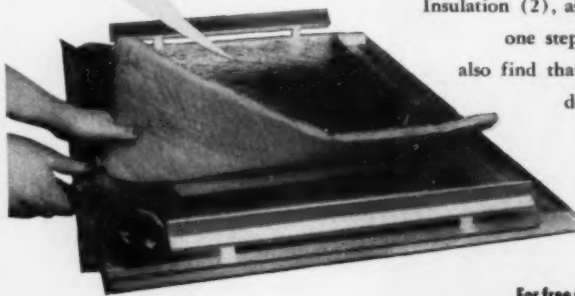
Foil-faced **ULTRALITE** Insulation replaces baffle plate;
saves time and metal, keeps jackets cooler!

Now you can do a superior job of furnace insulation—and save precious steel in the bargain—by using Ultralite, the long, strong glass fiber insulation!

The new method, as practiced by leading furnace manufacturers, is simply this: Replace baffle plates (1) with blankets of Ultralite thermal and acoustical Heater

Insulation (2), as shown in the photo above. By removing one step in your operations, you'll save time. You'll also find that Ultralite keeps jackets cooler and does a better job of deadening objectionable popping and crackling noises!

You can adhere Ultralite thermal and acoustical Heater insulation to metal with adhesives alone; it is not necessary to use screws and washers. Ultralite's long, strong glass fibers are non-irritating, non-corrosive, fire-resistant, and as permanent as glass itself.



GUSTIN-BACON MFG. CO.

1412 WEST 12TH ST., KANSAS CITY, MO.

New York Chicago Philadelphia San Francisco Los Angeles
Houston Tulsa Ft. Worth

Visit our booth #736 at the A. S. H. & V. E. Show, Philadelphia, January 22-26

For free samples and catalog A.I.A. File No. 37-D-2, WRITE TODAY!

Please send me samples of ULTRALITE and catalog A.I.A. File No. 37-D-2. AA-1

NAME _____

COMPANY _____

ADDRESS _____

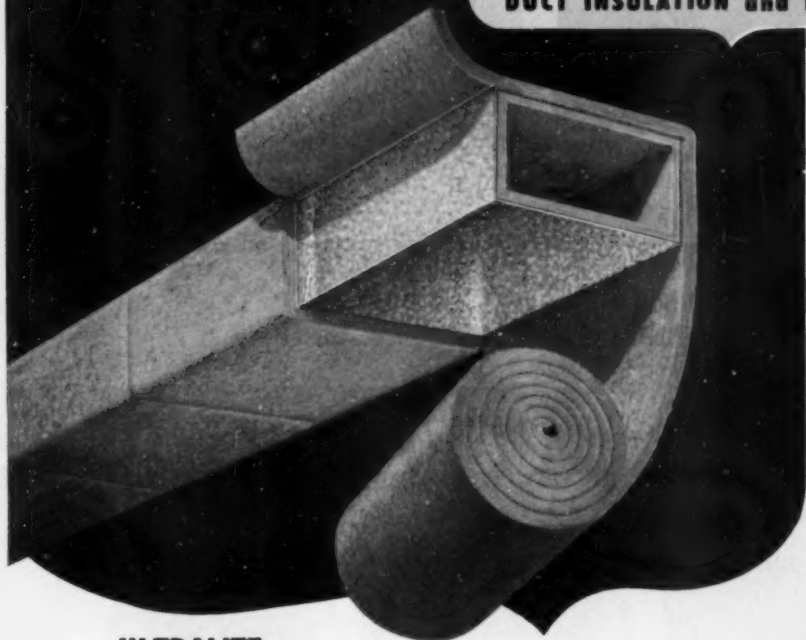
CITY _____

STATE _____

"DUCT SOUP"
It's
to line and wrap ducts with

ULTRALITE

DUCT INSULATION and DUCT LINER



ULTRALITE, the long glass fiber insulation, goes on faster, easier, and cheaper than any insulation you've ever used! For Ultralite Duct Insulation and Duct Liner have every characteristic that makes application easy and quick. They're light, flexible, resilient; you can cut them with a knife; run them quickly around curves and corners; adhere them to metal with adhesives . . . screws and washers . . . wires. Try Ultralite—soon!

ULTRALITE DUCT INSULATION — THERMAL

A soft, resilient, flexible insulation of long, fine glass fibers with a low K-Factor. Available plain or with your choice of 4 vapor barrier facings, already adhered to the insulation. Wrap-around method of application cuts applied costs way down. Non-irritating, pleasant to handle. Fire-resistant, non-corrosive to metals.



GUSTIN-BACON MFG. CO.

1412 WEST 12TH ST., KANSAS CITY, MO.

New York Chicago Philadelphia San Francisco Los Angeles
Houston Tulsa Ft. Worth

Visit our booth 5736 at the A. S. H. & V. E. Show, Philadelphia, January 22-26

ULTRALITE DUCT LINER — ACOUSTICAL

This is the duct liner that **won't burn**—a flexible, resilient, semi-rigid glass fiber insulation designed specifically as acoustical duct liner. Won't break, flake or chip. Runs quickly around curves and corners. Friction loss is low. Won't delaminate under air movement; won't flake off in air stream.

For free samples and catalog A.I.A. File No. 37-D-2, WRITE TODAY!

Please send me samples of ULTRALITE and catalog A.I.A. File No. 37-D-2.		AA-1
NAME _____		
COMPANY _____		
ADDRESS _____		
CITY _____	STATE _____	



**Industrial
Process Fans**



**Furnace and
Unit Conditioner Fans**

Extra Heavy

Construction...



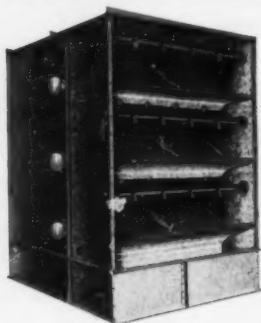
**Unicoil
Conditioning Units**



**Ventilating
and Conditioning Fans**

Choice of leading
architects, engineers
and contractors — for
nearly 40 years.

• • • • •



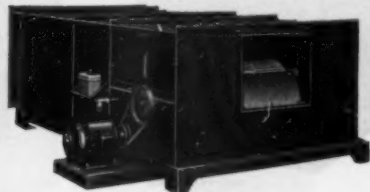
**Air Washers
and Purifiers**



• • • • •



**Unitherm
Unit Heaters
with Syncrotherm Control**



**Multitherm
Conditioning Units**



**Clarco
Unit Heaters**

... for

Extra Years of Service

No weaklings in the Clarage air handling and conditioning line! . . . Every unit we built is *fully equal* to the job it handles.

If faithful performance and operating economy are what you're after, we have the answer to your requirements. Your inquiry is invited. Try us!

SEE OUR EXHIBIT

**TENTH
INTERNATIONAL
HEATING & VENTILATING
EXPOSITION
Philadelphia
January 22-26**

CLARAGE FAN COMPANY

KALAMAZOO, MICHIGAN

Application Engineering Offices in All Principal Cities



Gas Forced Air
Flo-Warm Furnace

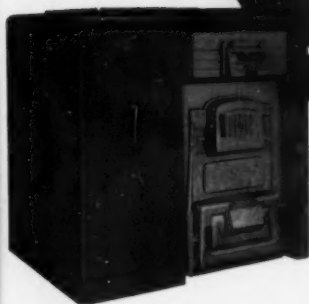


Gas Gravity Furnace

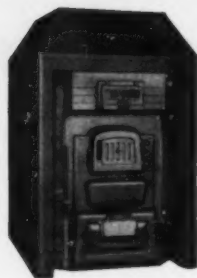


Gas Hi-Boy Furnace

THE WILLIAMSON HEATER COMPANY



Triplife Flo-Warm
Furnace



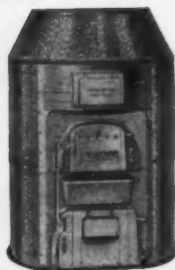
Triplife Square Cased
Gravity Furnace



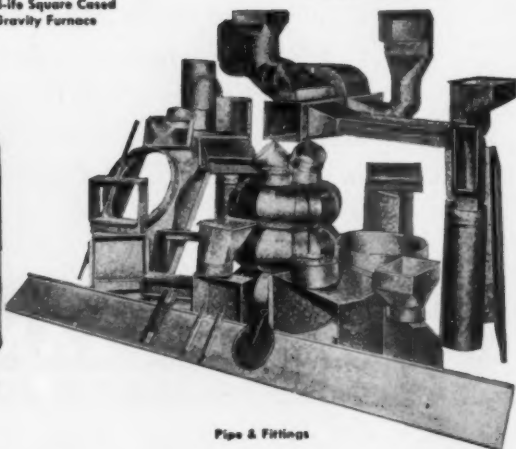
Triplife Round Cased



Standard Flo-Warm
Furnace



Standard Round Cased
Gravity Furnace



Pipe & Fittings



Oil De-luxe Flo-Warm
Furnace



Oil Flo-Warm Forced
Air Furnace



Oil Hi-Bay Furnace

Complete Line

WARM AIR
HEATING
and WINTER
AIR CONDITIONING



Steel Flo-Warm
Furnace



Steel Round Cased Gravity Furnace

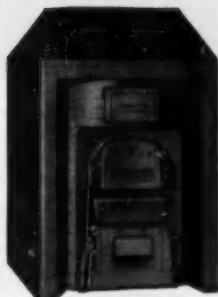


Steel Square Cased Gravity Furnace

Gas, Oil, or Coal—there is a Williamson Warm Air Furnace for any size installation. Beautifully styled, built for life-time service, and designed for fuel economy, the above models represent 60 years of research—and dealer satisfaction. For greater sales, easier installations, more enthusiastic customers and bigger profits investigate the Williamson Complete Line. Write for details—



Standard Pipeless
Furnace



Standard Square
Cased Furnace

THE WILLIAMSON HEATER COMPANY
Dept. AA, 4553 Marburg Ave.
Cincinnati 9, Ohio



Stoker



Gas Burner



Oil Burner



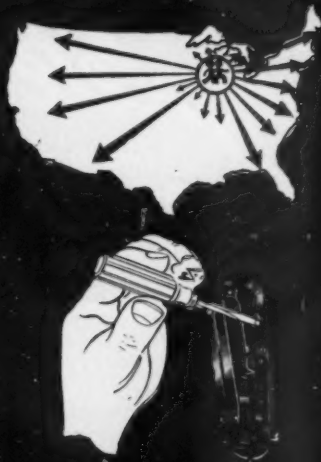
Blower

**MORE PEOPLE TO
HELP YOU . . .**

(expanding distributor network)

**LESS SERVICING
FOR YOU . . .**

(in the home)



This powerful "one-two" punch is working for you! Today, Perfex "Controls You Can Trust" are readily available from a coast-to-coast network of franchised distributors (and the network is constantly expanding). You have an organization nearby to supply new controls, handle repairs and replacements, help you with sales and service problems. Consult your classified phone directory for nearby Perfex distributor, or write us.

Secondly, records prove Perfex to be truly "Controls You Can Trust". Expert engineering, precision production and thorough inspection of every Perfex Control have reduced the number of inoperative controls returned for replacement to an amazingly low figure. This means less trouble, reduced labor cost, fewer service calls, more satisfied customers for you. If you are not among the alert dealers who are profiting from this unique Perfex combination of more people to *help* you . . . and less servicing *for* you . . . get "hep" today! A postcard will bring you latest literature and prices.

See latest
heating control
developments
A.S.H.V.E. Show
at our booth
Nos. 707-709

PERFEX
CONTROLS YOU CAN TRUST

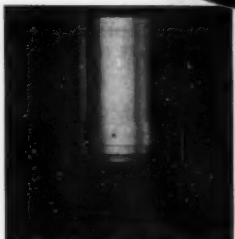
PERFEX CORPORATION, MILWAUKEE, WISCONSIN
In Canada, Perfex Controls Ltd., Toronto 1, Canada

AUTOMATIC TEMPERATURE CONTROLS • INDUSTRIAL ENGINE RADIATORS • COLOR PROCESS PRINTS

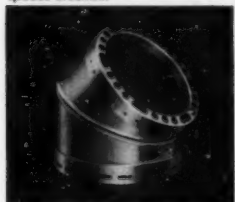


HIGHER PROFITS SAFER VENTING

WITH **UL** LISTED **QC METALBESTOS** GAS VENT



Adjustable length eliminates cutting, speeds erection.



Adjustable elbows simplify installations.



Double-wall, all aluminum pipe assures correct venting.

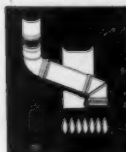
More Installations per Hour . . . More jobs can be finished per man each day than is possible with any other U.L. listed Type B gas vent. No special tools or skills are needed. Adjustable lengths permit fractional adjustments during and after installation . . . costly jigs, cutting and cementing of joints are eliminated. Single or multiple installations are finished faster and safer when you use QC Metalbestos.

Easy to Handle . . . A carton containing 45 feet of 4-inch Metalbestos weighs only 32 pounds. One man can load, stock-pile or install even the largest diameters without fatigue — can carry 90 feet of pipe at one time with ease.

Safe and Durable . . . Precision manufacture assures automatic alignment, gas-tight joints and a completely safe installation. The pure aluminum inner wall attains efficient venting temperatures rapidly . . . condensation and sweating are held at a minimum. Maximum insulation and the high resistance of Metalbestos to weather and corrosion insure long years of trouble-free operation.

REMEMBER . . . Metalbestos Gas Vent meets or exceeds all safety requirements of the Underwriters' Laboratories for Type B gas vents.

Order from your local jobber or write to Dept. B



METALBESTOS DIVISION

WILLIAM WALLACE COMPANY • BELMONT, CALIF.

Syncromatic

SHOWS YOU HOW TO BUILD YOUR FUTURE SALES
SUCCESS AROUND *The Leader* IN CONSTRUCTION...DESIGN
PERFORMANCE...APPEARANCE...EASE OF INSTALLATION

FAMOUS
PATENTED
COUNTER FLOW
HEAT EXCHANGER
BUILT OF
10 GAUGE STEEL

•
ALL CONTROLS
MOUNTED
IN UNIT

•
INSULATING
PRECAST
REFRACTORY
FACTORY
INSTALLED



LOCK SLIP
JOINTS
COMPLETELY
SEAL CASING
AGAINST
AIR LEAKS

•
BASE OF UNIT
RAISED OFF
THE FLOOR

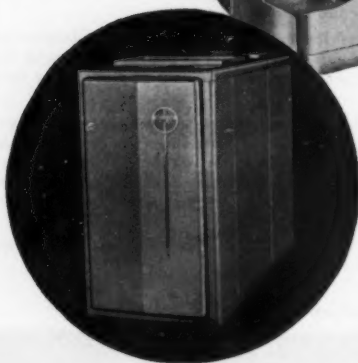
•
LARGE WELL
BALANCED
BLOWER
MOUNTED IN
RUBBER FOR
QUIET
OPERATION

"700" OIL FIRED SERIES

PERFORMANCE . . . The Patented Counter Flow principle of Syncromatic Furnaces is the factor which gives you the BIG PLUS in home heating dollar value.

HEAVY 10 GAUGE CONSTRUCTION . . . Syncromatic and ONLY Syncromatic gives you a heavy 10 Gauge Heat Exchanger . . . the heaviest in the automatic furnace field, which coupled with the COUNTER FLOW principle of balanced heat transmission gives you LONG LIFE and SAFETY as well as high operating efficiency.

LOW COST . . . Dollar for dollar Syncromatic represents the biggest home heating value on the market today. Just compare the weight and quality of material and unequalled design of this unit with other equipment you can buy.



MANUFACTURED BY

Syncromatic Corporation
WATERTOWN, WISCONSIN

Syncromatic

STEEL WARM AIR FURNACES



for **OIL · GAS · COAL**

THE FURNACE THAT SELLS ITSELF
FOR *you* BY COMPARISON ALONE!

*and here's
Why!*

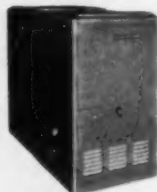
The heaviest steel line of furnaces in a complete coverage of sizes and types — just compare! The famous patented COUNTER-FLOW design produces maximum efficiencies from 60,000 to 1,000,000 B.T.U. Constructed for ease of installation and service — incorporating your own recommendations. And, to top it off — real quality — eye appeal — beauty — all to make your selling job easier.

Gas

NATURAL
MANUFACTURED
MIXED and L.P. GAS



GFB 420-21
HIGH BOY UTILITY
75 and 100,000 B.T.U.



GFB 422-24-27-30
BASEMENT MODELS
120 to 240,000 B.T.U.



GFB 410-11
DE LUXE BASEMENT MODEL
75 and 100,000 B.T.U.

Oil



OFB 621
HIGH BOY
85,000 B.T.U.



OFB 200 SERIES
5 sizes
110 to 230,000 B.T.U.

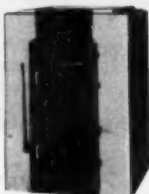


700
DE LUXE SERIES
110 and 146,000 B.T.U.

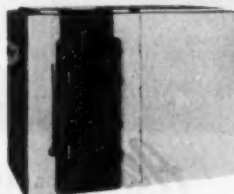


800 SERIES
LOW-COST HOUSING
80-94 and 108,000 B.T.U.

Coal



CF GRAVITY
SERIES — 5 sizes
70 to 185,000 B.T.U.



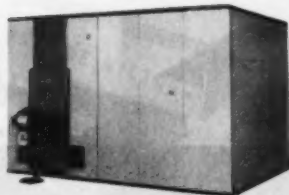
CFB FORCED AIR
5 sizes
90 to 230,000 B.T.U.



HI-CAP — The modern high capacity steel warm air furnace with high operating efficiencies using famous patented counter-flow design.

10 SIZES
330 to 1,000,000 B.T.U.

and **HI-CAP** **OIL · GAS · COAL**



MANUFACTURED BY
Syncromatic Corporation
WATERTOWN, WISCONSIN

Open Up...

THE EXCLUSIVE **VICTOR** FRANCHISE

Your VICTOR franchise provides you with an EXCLUSIVE territory, large enough for big profit volume... a territory ALL yours. You gain the prestige of representing a quality furnace line sold under no other name. Exclusive sales features of genuine merit which, with the expert, prompt and FREE Hall-Neal engineering service, enables you to sell EASIER... FASTER and sell MORE.

Complete...

VICTOR Fuel Saving FINS



A miniature, table-top, FIN furnace demonstrator proves, with twin thermometers, that VICTOR FINS increase fuel economy 20 to 30%. IT CLOSES SALES FAST!

SALES TOOLS

Real selling color circulars on each model gas, oil and coal furnace. FREE newspaper adv. mats. Displays, illuminated signs, novelties, sales manual and a proven, co-operative advertising plan that clicks. You cannot afford NOT to investigate VICTOR for '51!

For OIL

R-75

R-110

For GAS

J-100
and J-120

J-150

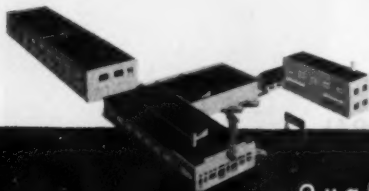
For COAL

SERIES F
DELUXE
SQ. FORCED AIR

F DELUXE
ROUND
GRAVITY

Also

OIL BURNERS... GAS BURNERS...
STOKERS... BLOWERS...
SUMMER COOLING SYSTEMS...
FITTINGS AND ACCESSORIES...



HALL-NEAL

Quality Furnaces Since 1890

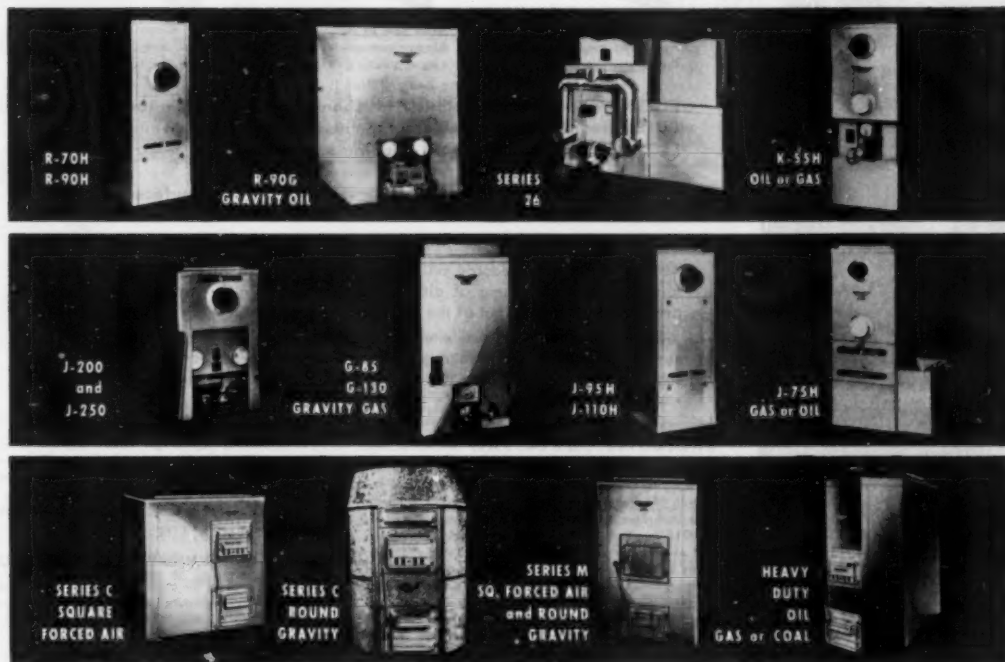
1322-42 N. CAPITOL AVE., INDIANAPOLIS 7, IND.

...Another Page of '51 Profits

THE **VICTOR** LINE

The VICTOR line is COMPLETE. There are nearly 100 models in Gas, Oil and Coal for every size installation and . . . it's the line with the famous, patented fuel-saving FINS, an exclusive VICTOR feature. You deal with ONE manufacturer for all furnaces, accessories, sales and engineering assistance. You are fully equipped to . . . sell EASIER . . . FASTER and sell MORE.

IT'S THE ONLY FURNACE
WITH
FUEL-SAVING



Investigate VICTORS • Write Us TODAY

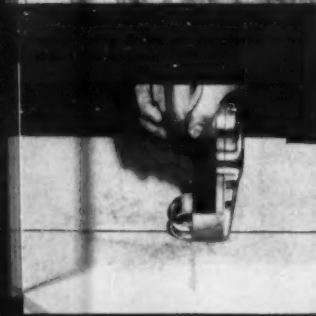
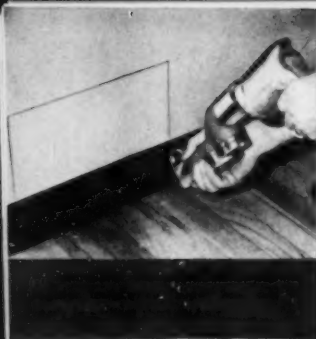
Do it NOW! Get the complete story about the exclusive VICTOR territory set-up. Investigate us . . . and the VICTOR line . . . you'll make more money in '51.

FURNACE Co.

Quality Furnaces Since 1890

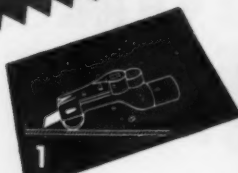
1322-42 N. CAPITOL AVE. INDIANAPOLIS 7, IND.

THE VICTOR LINE
TAKES YOU OUT OF THE
COMPETITIVE CLASS

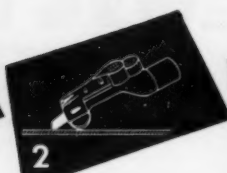


RCs SUPER SAW

no
starting
hole
needed!



1 Hold tool tightly against material, using guide as a fulcrum, then start drill.



2 With saw in motion bring tip of blade in contact with work, with bottom of guide tightly against work.



3 As blade starts cutting, raise tool slowly to an upright position. Guide direction of cut.

CUTS wood siding—"Inselbrick"—"Ebonite"—"Transite"—fibre—formica, etc.
CUTS galvanized, sheet and other metals—cable—pipe—wire—nails, etc.
CUTS brittle materials without chipping or breaking.
CUTS any shape: curves—angles—circular, etc.
CUTS accurately on bends—curves—concave—convex surfaces.

STOP WASTING TIME AND MONEY WITH OLD-FASHIONED SAWING METHODS!

Actual "on-the-job" records prove that Super Saw saves up to 75% of the time formerly spent on dozens of different roughing-in jobs... prove that Super Saw pays for itself quickly out of the savings it effects!

Super Saw has almost unlimited applications. Every day, men in all types of business and industry are finding new uses for this marvelous new tool. Wherever cutting is done, Super Saw has proved its tremendous usefulness by doing better work, quicker and easier.

EXCLUSIVE SUPER SAW FEATURES

NO TORQUE OR SPIN—Anti-friction bearings and correct "balance" permit easy handling—finger tip control. No handles are required. Operator does not fight tool. Permits working to fine tolerances. • **AIR COOLED**—Built-in blower keeps tool comfortably cool even under continuous duty operation. Exhaust air blows chips and sawdust from in front of saw blade, clearing cutting line. • **MODERN DESIGN**—Light-weight, sturdy construction. Less operator fatigue, longer tool life. Fits the hand comfortably. Long slim lines make it easy to work in places usually hard to get into with conventional saw. • **UNIVERSAL CONNECTION**—Fits any $\frac{1}{8}$ " or $\frac{1}{4}$ " electric drill, flexible shaft or air drill. No special chucks or adaptors needed. Recommended power $\frac{1}{4}$ " heavy duty drill 2000-5000 r.p.m. • **ONE SHOT LUBRICATION**—Grease fitting on under side of case fits special Super Saw lubricant tube; one application lubricates all moving parts.

SAFE—Operator cannot get hands in front of moving blade because both hands are required to operate the tool. • **RUGGED CONSTRUCTION**—Every wearing surface has heavy "oilite," phosphor bronze or high speed ball bearings. All bearings (or assemblies) are easily removed and replaced.

SUPER SAW GIVES YOU "PLUS" VALUE

Super Saw is not to be confused with so-called "light-duty" or "intermittent duty" power tools; it is designed for day-in and day-out constant duty use—right on the job as well as in the shop.

Complete interchangeability of precision made, production-line parts provides quick and easy replacement of ALL parts subject to wear, and Super Saw Dealers are available for fast, local service in all parts of the country. Regardless of how long or how hard you use your Super Saw, it need never develop excessive play or chatter, need never lose its original high efficiency



RCS

SUPER SAW



Saves you more actual time, right on the job, than any other tool in your kit!

No. 2—length 3 1/4". Tooth sizes 10 and 18 teeth. This blade is for roughing-in for heating, plumbing, electrical, insulating and general maintenance. Cuts to a depth of 2". These blades cut through nails embedded in wood. Size 18T used for opening boxes and crates.



No. 4—length 5 1/4". Tooth sizes 10 and 18 teeth. This blade has the same uses as No. 2 blade but cuts to a depth of 4". Cuts across and down through plates in heating and plumbing work.



No. 5—length 3 3/4". Wood Scroll—Unbreakable—Made of finest Swedish steel. This blade is for roughing-in circular or irregular openings in heating, plumbing, air conditioning. Cuts to depth of 2 1/2".



No. M-2—length 10". Hacksaw blade. Shatterproof—flexible back—high speed teeth. Tooth sizes 24 and 32 teeth. For cutting sheet metal, formica, composition material, steel pipe. Break to convenient lengths for use.



No. T-1—length 4". Hacksaw blade. High speed. All hard. Tooth sizes 24 and 32 teeth. For cutting sheet metal, formica, light gauge steel, etc.



No. ST-1—length 2 3/4". Metal Scroll. High speed. All hard. Tooth sizes 18, 24 and 32 teeth. For working circular cuts in light metal and "Transite."

No. ST-2 (not illustrated)—length 3 3/4". Heavy Duty Scroll for cutting elliptical and circular openings in class 2 "Transite" pressure pipe and heavy "Transite" siding.



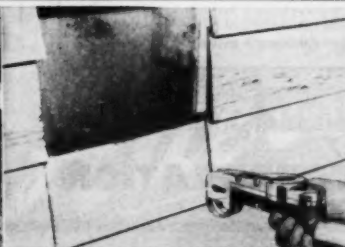
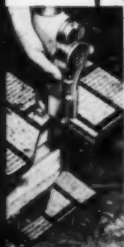
No. 6 (not illustrated)—length 12" and 18". Special combination blade for removing siding and asbestos shingles in sidewall insulation. Tooth size 18 teeth.

SUPER SAW LUBRICANT—Tube 60c. Special non-fluid lubricant packaged in convenient tube which screws into grease fitting on SUPER SAW case. Do not use any other kind of lubricant for this tool.



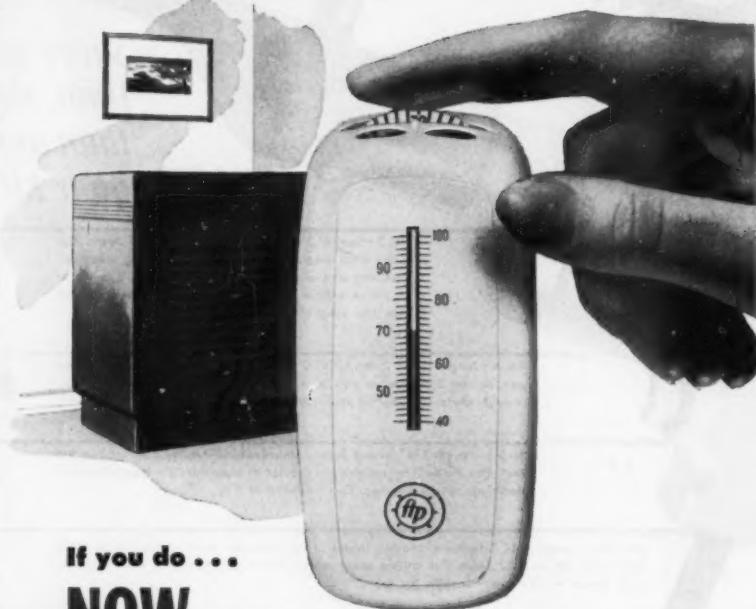
Send for catalog and prices: **Bulletin — A-51**

R.C.S. TOOL SALES CORPORATION • Joliet, Illinois, U.S.A.



DO YOU SELL ONE OF THESE FAMOUS MAKE SPACE HEATERS?

ALLEN'S
 BARNES
 BEYER
 COLE HOT BLAST
 COLEMAN
 COLEMAN (Canada)
 CREST (Canada)
 CUSTOM-AIRE
 DUO-THERM
 ENTERPRISE
 ENTERPRISE (Canada)
 ESTATE-HEATROLA
 FINDLAY (Canada)
 FLORENCE
 H. C. LITTLE
 HERCO (Canada)
 INTERNATIONAL
 JUNGERS
 LACO
 LONERGAN
 MAGIC CHEF
 MONARCH
 MONARCH (Canada)
 MONOGRAM
 NESCO
 NORGE-HEAT
 PERFECTION
 PREWAY
 QUAKER
 SAFEWAY
 SIEGLER
 SILENT FLAME
 SUPERFLAME
 TORRIDAIRE
 WASHINGTON FRUGAL



If you do . . .

NOW YOU CAN EARN EASY ADDITIONAL PROFITS BY SELLING AUTOMATIC HEAT CONTROLS

Yes, if you sell one of the famous-make space or trailer heaters listed here you can offer every customer the luxury of true automatic, thermostatically controlled heat! This means easier selling, because you can offer comfort and convenience equal to the most expensive kind of heating, with no wasted heat — and substantial fuel savings!

What's more, this easy-to-sell comfort means ADDITIONAL PROFITS for you. Write now for Bulletin T-2 on A-P Comfort Controls.



EASY TO INSTALL

There's an A-P Electric or Mechanical Comfort Control actually engineered to fit these heaters. Just mount conversion top on present manual control; connect to thermostat and transformer. Mechanical thermostat even eliminates wiring!



DEPENDABLE Controls

Famous for completely reliable service . . . in oil heating . . . gas heating . . . refrigeration.

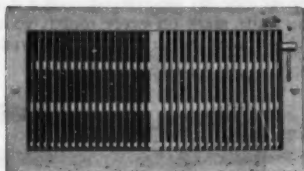
A-P CONTROLS CORPORATION

(formerly Automatic Products Company)

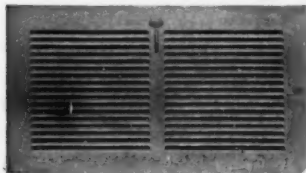
2452 N. Thirty-second Street • Milwaukee 45, Wisconsin • In Canada: A-P Controls Corporation, Ltd., • Cooksville, Ontario



No. 100SV-HML—Streamliner Register with single bank of vertical bars, multi-louvre shutters



No. 4432—Airo-Flex Multi-valve Register—4-Way Directional



No. 7032—Airo-Flex Single Valve Register—Adjustable Pins

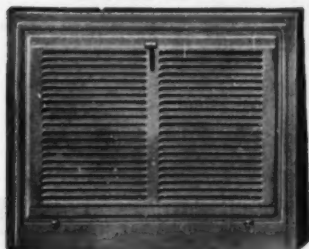


Fig. H-800—Heat-Rite Baseboard Register



Fig. CCI—Push-in Clothes Chute Door

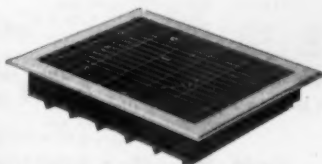


Fig. DR—DuraBilt Floor Register



No. 31A—Perforated Grille



Fig. DSC—DuraBilt Intake. Also ideal for floor furnace use

*You'll See More
and More of*



You see them NOW, on quality heating and air conditioning jobs all over the country. For these are the registers used by a high percentage of the trade, jobbers and contractors who take pride in the products they handle and the work they do. In our big new Cleveland plant, with latest automatic equipment, we are turning out finer products than ever — and more of them.

In a wide variety of models, ranging from accurately adjustable multiple diffusion types, for high velocity outlets, to the simplest gravity registers — Auer covers every need in the heating and air conditioning field. We also have a special department for your exact requirements on perforated grilles. For uniform excellence in all these products, you can depend on Auer, as always.

THE AUER REGISTER COMPANY

6600 CLEMENT AVE.

CLEVELAND 5, OHIO

CANADIAN DISTRIBUTOR, MARCHAND FURNACE LTD., TILBURY, ONT.

Ask for complete Auer Register Book, or special Grille Catalog "G" on perforated grilles.

Auer

REGISTERS

& GRILLES for AIR CONDITIONING & GRAVITY



CHICAGO STEEL SLITTING SHEAR

For slitting long sheets and for cutting steel bars, band iron, etc. Main frame one piece solid steel with offset for clearance in cutting long sheets. Capacity 5/16 x 2" bars, 10 gauge sheets. Blades are made of high grade tool steel. Equipped with adjustable hold down.



NO. 1 PUNCH

Capacity 1/2" hole through 1/4" iron
Length 34". Wt. 23 lbs. Depth of throat 1 1/2"
Punches and dies 1/8" to 9/16" by 1/64"



**No. 4-B
TINNER'S PUNCH**

Capacity 1/4" hole through 16 gauge iron
Length 8 1/2". Wt. 3 lbs. Depth of throat 2"
Punches and dies 1/16" to 9/32" by 1/64"



**TINNER'S RIVETING
HAMMER**



PUNCHES
Whitney PUNCHES For Ball Bearing
Screw Punches

No.	Sizes	Dimensions H. B.	Inches L.
10-1/8	to 1/2 by 32nd	5/8 1/2	1-3/16
20-1/8	to 11/16 by 32nd	7/8 11/16	1-3/4
40-3/16	to 1 by 32nd	1-3/16 1	2-5/16



PUNCHES
Whitney PUNCHES For Lever
Punches

No.	Sizes	Dimensions D.	Inches L.
1	1/8 to 9/16 by 64th	9/16	2-3/8
*2	3/32 to 1/2 by 64th	1/2	2-3/8
4	1/16 to 9/32 by 64th	5/16	1-3/16
5	1/16 to 9/32 by 64th	9/32	1-1/4
*6	1/8 to 9/32 by 32nd	1/2	2-3/8
7	1/8 to 7/16 by 32nd	7/16	1-7/8
7-1/2	1/8 to 7/16 by 32nd	1/2	2-3/8
8	1/16 to 7/16 by 64th	7/16	1-15/16

*This punch used in No. 2 Channel, Close Corner No. 2, Close Corner Channel, No. 6 and Imperial No. 8.



THE BEST IN HAND TOOLS MEANS W. A. WHITNEY

W. A. Whitney tools are your best bet because they are simple in design, sturdily constructed for the toughest uses, well balanced for easier handling, made from drop forgings of high grade alloy steel on all main parts, heat treated on all wearing parts, and unconditionally guaranteed against defects in material and workmanship. Our trade mark on every tool is your assurance of entire satisfaction and the utmost in service. Please write us today for our complete catalog.



NO. 2 PUNCH

Capacity 5/16" hole through 1/4" iron
Length 23". Wt. 14 lbs. Depth of throat 1-11/16"
Punches and dies 3/32" to 1/2" by 1/64"



NO. 6

Skylight, Ventilating and Tank Flange Punch (Especially adapted for button punching)

Capacity 1/4" hole through 3/16" iron
Length 26 1/2". Wt. 10 1/2 lbs. Depth of throat 1 1/2"
Punches and dies 1/8" to 9/32" by 1/32"



**TINNER'S SETTING
HAMMER**



DIES
Whitney Dies For Ball Bearing
Screw Punches

No.	Sizes	Dimensions D.	Inches W.
10-1/8	to 1/2 by 32nd	13/16	15/32
20-1/8	to 11/16 by 32nd	1-1/4	21/32
40-3/16	to 1 by 32nd	2-1/8	15/16



DIES
Whitney Dies For Lever Punches

No.	Sizes	Dimensions D.	Inches L.
1	1/8 to 9/16 by 64th	9/16	2
*2	3/32 to 1/2 by 64th	1/2	1-3/4
4	1/16 to 9/32 by 64th	7/16	3/4
5	1/16 to 9/32 by 64th	7/16	3/4
*6	1/8 to 9/32 by 32nd	9/16	1-5/8
7	1/8 to 7/16 by 32nd	3/4	1-7/16
7-1/2	1/8 to 7/16 by 32nd	3/4	1-7/16
8	1/16 to 7/16 by 64th	11/16	1-1/4

*This die used in No. 2, Channel, and Imperial No. 8.
*This die used in No. 6, Close Corner No. 2 and Close Corner Channel.
When ordering punches be sure to specify size of punch and number of tool in which punch is to be used.



CHANNEL IRON PUNCH

(A companion to No. 2 Punch)
Capacity 1/4" hole through 1/4" iron
Length 23". Wt. 17 lbs. Depth of throat 1 1/2"
Punches and dies 3/32" to 1/2" by 1/64"



NO. 8-B PUNCH

Capacity 1/2" hole through 1/4" iron
Length 18 1/2". Wt. 7 1/2 lbs. Depth of throat 2"
Punches and dies 1/16" to 7/16" by 1/64"

NO. 91 BENCH PUNCH

Capacity 1/2" hole through 1/4" iron
1/4" hole through 3/16" iron
2" hole through 1/2" iron
Weight 82 lbs. Depth of throat 5"
Punches and dies 1/8" to 2"

CHANNEL IRON
2 1/4" Flange x 1/4" Web

Angle Iron
2 1/2 x 2 1/2 x 1/4"



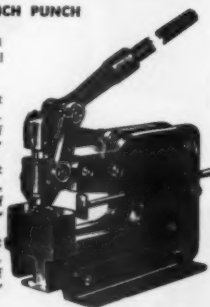
NO. 92 BENCH PUNCH

(Uses No. 91 punches and dies)

No. 92 Weight
165 lbs.
Depth of throat 10"

No. 93 Weight
500 lbs.
Depth of throat 18"

No. 94 Weight
675 lbs.
Depth of throat 24"



W. A. WHITNEY MFG. CO.

**636 RACE STREET
ROCKFORD, ILLINOIS**

Sell **PACKAGED
HOME COMFORT**
AUTOMATIC FURNACES • 22 SIZES and TYPES



See the
Sensational **NEW**
HEATRAP

First Showing
PHILADELPHIA • Jan. 22-26

Write for Literature and Prices

J. V. PATTEN CO.
SYCAMORE, ILL.

at the
other end
of your telephone . . .



Hoover®

SERVICE AGENCIES

guard your good name

Your reputation depends, more than anything else, on the performance of the products you sell. Which is why whenever you sell or install a motor or a replacement motor for a ventilating fan, oil burner, pump, home workshop, or, in fact, any purpose at all, it's mighty wise to make it a **HOOVER** Motor!

Hoover Motors are famous for reliability

. . . for long, quiet, dependable service. And if there ever *IS* trouble—as there sometimes is in *ANY* motor—there's a Hoover Service Agency near at hand to restore the motor to operation in a jiffy!

Service like that guards *YOUR* good name at the same time it guards the good name of Hoover. Worth considering, don't you think? Worth selling Hoover!



Hoover Motors for every need. General-purpose Hoover Motors come in 3 basic types: **CAPACITOR-START MOTORS** (¼ through 3 HP) for hard-to-start, continuous-duty applications; **SPLIT-PHASE MOTORS** (¼ and ½ HP) for easy-to-start, quick-to-accelerate applications; and **POLYPHASE MOTORS** (¼ through 5 HP) for use where three-phase supply lines are available. Also there are Hoover Motors designed especially for pumps, oil burners, fans and blowers. Write for details.

THE HOOVER COMPANY

Kingston-Conley Division
68 Brook Avenue
North Plainfield, New Jersey



* **EVENFLO MODULATED FLAME**



is today's **Big News**

in Home Heating

✓ **KEEPS COSTS DOWN**

✓ **MAKES MORE SALES**

The New EvenFlo Gas-Fired warm air furnace helps Heating Contractors beat competition—its brilliantly engineered modulated jet flame control system actually *pays for the unit* in a few years through fuel economy!

IT STAYS ON THE JOB

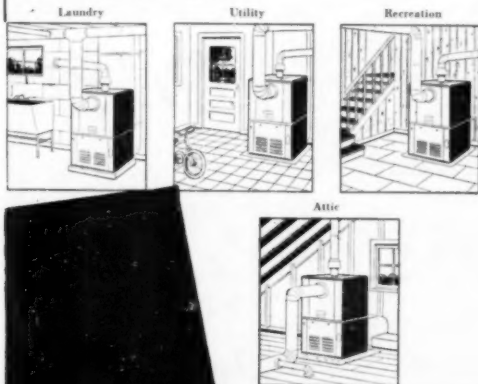
The Modulated Control System stabilizes home temperature—it insures a constant flow of even heat by flame modulation—with any standard fuel gas. . . . **Mixed, LP, Natural or Manufactured gas.** Provides gravity heat when electricity fails.

✓ **HEATS 4, 5, 6, 7, OR 8 ROOMS**
✓ **SAVES SPACE—EASILY INSTALLED**

It's the ideal heating unit for almost any housing job you handle. A simple change in size of air circulator, (not in size of furnace) provides perfect heating in every room. Delivers up to 50,000 cu. ft. of cleaned air per hour through double filters and forced air system.

Save on installation—easily installed in any room. Needs no excavation or special installation construction. Requires only 26" by 26" floor space.

Manual and automatic controls, all easily accessible and thermostatically controlled. Its eye appealing, compact design will please your buyer—its efficiency and economical operation will guarantee his satisfaction.



* **EVENFLO MODULATED FLAME**

A constant flow of even heat with NO wasted fuel

COLD OUTSIDE . . . HIGH FLAME

As the outside temperature drops, the flame modulates in size automatically, retaining your selected thermostatic room temperature constantly.

MODERATE OUTSIDE . . . MODERATE FLAME

As the outside temperature moderates, the flame modulates in size automatically, again retaining your selected thermostatic room temperature constantly.

WARM OUTSIDE . . . LOW FLAME

As the outside temperature rises, the flame modulates in size automatically, still retaining your selected thermostatic room temperature constantly.

Write for complete, descriptive literature



Material & Workmanship Guaranteed By Tokheim Oil Tank & Pump Co.

Approved by A.G.A.

10 So. La Salle Street

Chicago 3, Illinois



CENTURY

**Automatic Heating Equipment
can make money for
you every day!**

44 CENTURY Units
help you close more sales!

It has been pretty well established that a heating dealer who sells from a **complete line**, closes more sales and shows a larger net profit at the end of the year. Century specializes in fully automatic heating equipment and offers 44 units that will enable an alert heating dealer to bid on the profitable automatic heating installations in the residential and commercial field.

Century Automatic Heating Equipment has a reputation for greater efficiency, dependability and lowered fuel costs that is of deep interest to every prospective purchaser. Century's reputation is the outgrowth of 26 years of service in automatic heating.

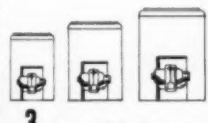
Century Engineering Corporation, Cedar Rapids, Iowa



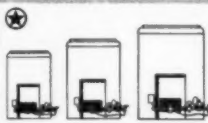
6 Sizes Oil HiBOYS
85-380 M/ B. T. U.'s



4 Sizes Gas HiBOYS
85-150 M/ B. T. U.'s



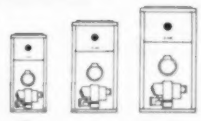
3 Sizes Oil Gravity
70-140 M/ B. T. U.'s



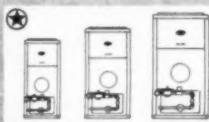
3 Sizes Gas Gravity
70-140 M/ B. T. U.'s



6 Sizes Oil (Basement)
105-380 M/ B.T.U.'s



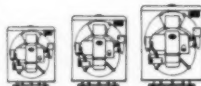
3 Sizes Oil (Basement)
100-170 M/ B.T.U.'s



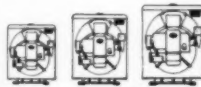
3 Sizes Gas (Basement)
100-170 M/ B.T.U.'s



2 Sizes Oil Vaporizing
60-80 M/ B. T. U.'s



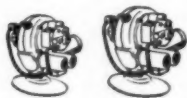
3 Sizes Oil Boilers 380-740
Sq. Ft. Radiation



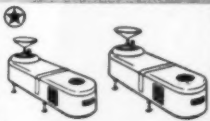
3 Sizes Oil Water Heaters
125-250 G. P. H.



4 Sizes: 3/4-5 G.P.H.
Conversion Oil Burners



2 Sizes: 5-20 G.P.H.
Conversion Oil Burners




2 Sizes: 87-250 M/ B.T.U.'s
Conversion Gas Burners

WRITE TODAY!

Some choice territories are open — let us tell you how you can build greater profits with an exclusive Century franchise.

CENTURY

The Finest in Automatic Heating Equipment.



What **YOU** can do to make the supply of Stainless Steel go further

THESE SUGGESTIONS for conserving Stainless Steel are made to assist you during the difficult period we face today. The withdrawal of large tonnages of Stainless Steel—vital for rearmament—make it imperative that supplies

of Stainless available for non-military use be made to go as far as possible. This can't be done without the close cooperation of everyone concerned—the steel producer, the steel supplier, and you, the steel user.

AMERICAN STEEL & WIRE COMPANY, CLEVELAND • COLUMBIA STEEL COMPANY, SAN FRANCISCO
NATIONAL TUBE COMPANY, PITTSBURGH • TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM • UNITED STATES STEEL COMPANY, PITTSBURGH
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST • UNITED STATES STEEL EXPORT COMPANY, NEW YORK



U·S·S STAINLESS STEEL

SHEETS • STRIP • PLATES • BARS • BILLETS • PIPE • TUBES • WIRE • SPECIAL SECTIONS

UNITED STATES STEEL

1

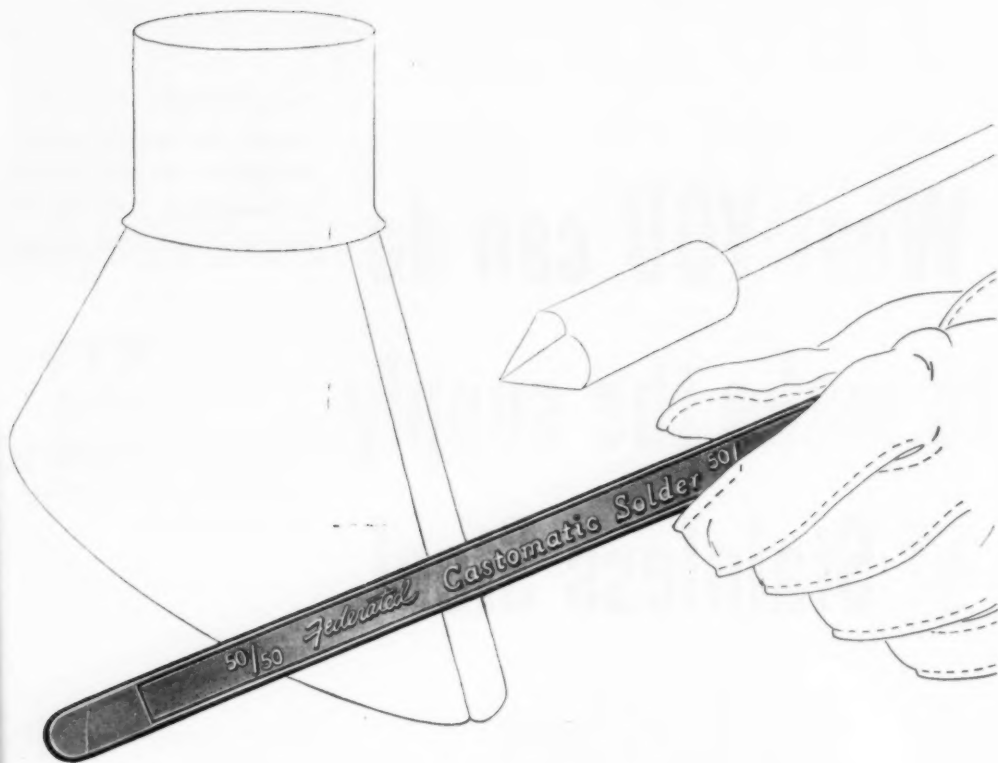
Tell your supplier the exact purpose the Stainless Steel is intended for and how you plan to fabricate it. Then you will get the *right* steel for the job.

2

Minimize your scrap losses by ordering the size that will cut to best advantage.

3

Indicate, if possible, acceptable alternates in composition, gage, size and finish . . . it may speed up deliveries to you.



What Makes a MACHINE-CAST SOLDER Better?

When we say "machine-cast" we mean Federated CASTOMATIC Solder, the only bar solder cast automatically.

CASTOMATIC is better... patented CASTOMATIC machines make a dross-free solder... harmful oxides are excluded from the completely pressurized system.

CASTOMATIC is extra fine grained... has no voids or segregation to slow down your sheet metal work. Every bar of a given analysis melts at the same temperature... you work faster, more freely, without costly interruption.

CASTOMATIC solder is available in all standard sizes and compositions through your local jobber.

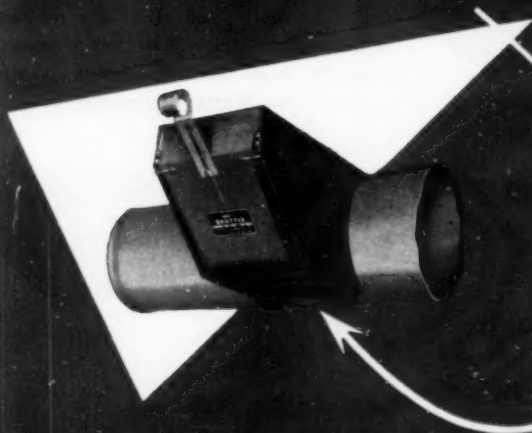
Federated Metals Division



AMERICAN SMELTING AND REFINING COMPANY • 120 BROADWAY, NEW YORK 5, N. Y.

NEW—SCIENTIFICALLY DESIGNED

Skuttle "WINDMASTER" BAROMETRIC DRAFT CONTROL!



• BETTER CONTROL

• EASIER INSTALLATION

• MORE PROOF

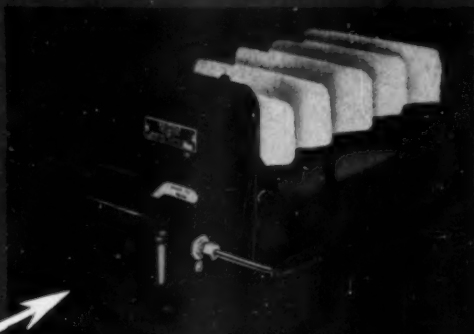
Equalizing and potential draft resistance provides more efficient opening with larger effective area. Tested characteristics show a flat curve, usually even, efficient, controlled draft operation at all draft rates. See the test chart. It shows draft resistance.

Exceptional economy of design and sturdy construction make you to offer your own the highest quality at lowest cost and dollar profit.

Installation is exceptionally easy—get your job done. Available in 2, 3, 4 and 6 inch sizes.

AIR CONDITIONING MEANS HUMIDIFIER AND FOR MORE EFFECTIVE HEATING, BELL SKUTTLE HUMIDIFIERS ARE ESSENTIAL

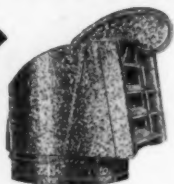
Control—effective control—demands good humidification. Without proper humidity, a home is a very uncomfortable place. Throats get dry and respiratory ailments increase. A humidifier is as necessary as a filter in forced warm air heating. Skuttle Series 400 Humidifier gives the better humidification. Self-feeding, self-cleaning—has the patented Vaportek valve that allows 70% more water. The patented valve has an anti-dry valve operation for heating. Made of brass and bronze—it's a quality, trouble-free unit. For better draft, Skuttle Humidifiers and Draft Controls.



THE SKUTTLE MANUFACTURING COMPANY • 4099 BEAUFAIT AVENUE • DETROIT 7, MICHIGAN

Ready-to-install **Swartwout Ventilators**

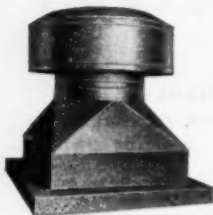
save valuable construction time—
conserve your sheet metal supply



Rotary

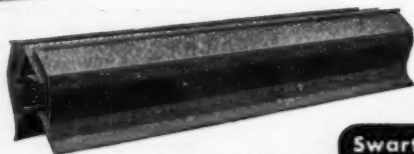


Airvalve



Valvent

Roof Ventilation continues to be an important need on all types of industrial and public buildings. The wide selection in Swartwout's line gives you gravity or power equipment for any requirement you encounter. Your share in modern ventilation contracts can be promoted profitably with this high quality, widely accepted line. Write for general bulletin.



Dexter Heat Valve



Airmover

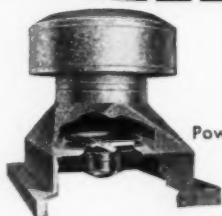


**Swartwout
Airlouvers**

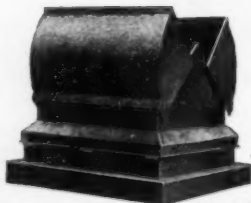
Weather-tight louvers, overlapping blade type. Unusual size range enables you to fill any opening with equal-size louver units. Adjustable or fixed.

**Swartwout
GRAVITY
Ventilators**

**Swartwout
POWERED
Ventilators**



Powered Valvent



Ject-O-Valve



Airlift
(duct exhaust)



Airjector

Swartwout

Industrial Ventilating Specialists

THE SWARTWOUT COMPANY • 18511 Euclid Ave., Cleveland 12, Ohio

Easy to Sell!
Easy to Install!
Easy to Service!
TORIDHEET

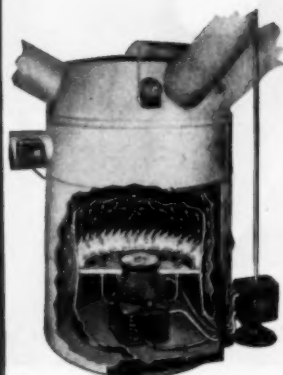


The Pioneer rotary wall flame oil burner

The customer-proved economy of TORIDHEET rotary wall flame equipment makes it your best bet for sales and satisfaction. TORIDHEET equipment sells easily and *stays sold*.

- Economical — saves up to 50% on oil
- Burns catalytic oil efficiently
- Quiet and clean
- Correct flame placement
- Fully automatic
- Trouble-free — one moving part
- Backed by 27 years of research and development

... For conversion jobs and in complete heating plants



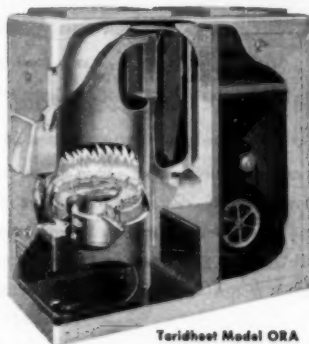
Toridheet Model F in warm air furnace



Toridheet Model ORU rotary fired boiler



Toridheet Model ORM rotary fired water heater



Toridheet Model ORA winter air conditioner

Other Toridheet units for every need... every budget... Gun Burners... Gun Fired Boilers and Furnaces... Gas Conversion Burners and Gas Fired Furnaces

CLEVELAND
Toridheet
 AUTOMATIC HEATING

TORIDHEET DIVISION

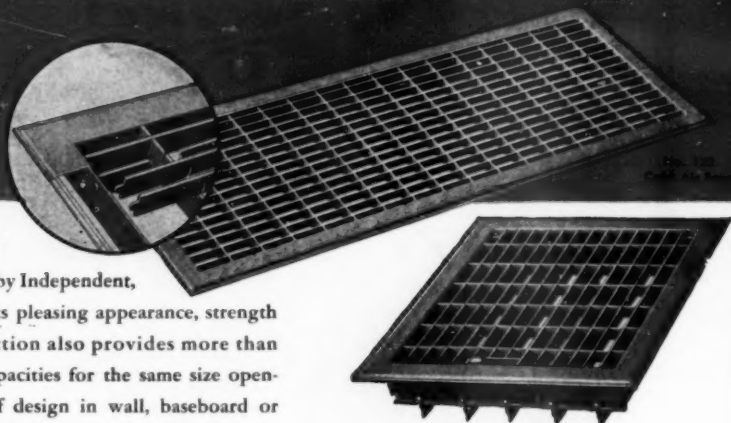
CLEVELAND STEEL PRODUCTS CORPORATION
 7306 Madison Avenue Cleveland 2, Ohio

Affiliated Canadian Manufacturers: Cooray Mfg. Company, Ltd., Catherine St., St. Catharines, Ont.

INDEPENDENT "Fabrikated"

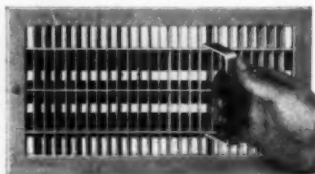
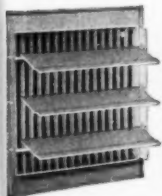
Reg. U. S. Pat. Off.

AIR CONDITIONING REGISTERS AND GRILLES



No. 32 Floor Register

"Fabrikated" construction, originated by Independent, has met wide acceptance because of its pleasing appearance, strength and rigidity. "Fabrikated" construction also provides more than usual free area, furnishing greater capacities for the same size opening. At the same time uniformity of design in wall, baseboard or floor registers and grilles is now possible.



Style 321A Grille (With Deflecting Vanes)

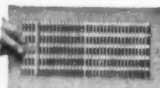
INDEPENDENT "Fabrikated" WALL GRILLES With Deflecting Vanes Provide 4-Way Air Flow

Compound deflections of air flows can be achieved with accuracy and certainty either at installation or any time afterward to meet changed conditions. Furnished with vertical grille bars and horizontal deflecting vanes or with horizontal grille bars and vertical deflecting vanes.

Practically any size in even inches. These same grilles are supplied without deflecting vanes to provide 2-way air flow.

INDEPENDENT WROUGHT STEEL AIR CONDITIONING REGISTERS

Vertical grille bars are manufactured at an angle of 30 degrees, one half to the right, one half to the left. They may be bent straight outward or to direct air flow at any other right or left angle. Multiple valves at the rear can be set to deflect air flow up, down, straight out, or for complete closure. Made for baseboard or wall installation.

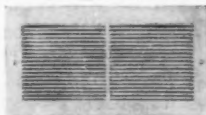


Design No. 238

INDEPENDENT WROUGHT STEEL REGISTERS

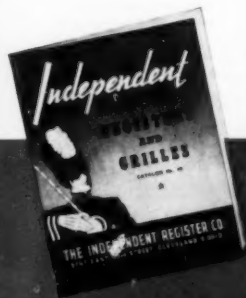


Design No. 139



Design No. 39-WG

These registers do not compete with "Fabrikated." They comprise a high grade line of air conditioning registers of attractive appearance which are desirable for lower priced installations. Made in both wall and baseboard types.



WRITE FOR COMPLETE CATALOG

Always Leading . . . Always Progressing
THE INDEPENDENT REGISTER CO.

3747 East 93rd Street, Cleveland 5, Ohio

The OIL-O-MATIC Dealer

...covers 97% of the residential heating market!



Model 70A 70,000 Btu Winter Air Conditioner . . . Only 22" wide, 38" long, 45" high. For small homes with basement. Streamlined beauty, compact, efficient!

Model 10A 100,000 Btu Winter Air Conditioner . . . 26" wide, 60 1/2" long, 52" high. For the 7 to 10 room home. Features Oil-O-Matic's Vertical Counterflow Principle. (Also available in 150,000 Btu model for 10 to 15 room home.)



Utility Model 1-5 70,000 Btu Winter Air Conditioner . . . 22" by 35" by 61" long. For space-saving horizontal installation in attics, basements, utility rooms, stores, garages, or as a floor furnace application. (Also available in Upright model for installation in closets, utility rooms.)



B-Series Steel Boiler-Burner Units . . . 4 sizes for steam (320-700 sq. ft.); 4 sizes for hot water (\$10-1120 sq. ft.). Built-in water heater optional.



C-Series Cast Iron Boiler-Burner Units . . . 4 sizes for steam (300-750 sq. ft.); 4 sizes for hot water (\$53-1340 sq. ft.). Built-in water heater optional.



OIL-O-MATIC COMPLETE UNITS are equipped with the sensational Model Fifty-Ten LOW PRESSURE Oil Burner . . . Burns catalytic oil with ease!

"You want two things in an oil heat franchise: the opportunity to make money and to build a sound business.

"Consider how well my Oil-O-Matic franchise meets these qualifications—take the market for complete units, for example...

"There's a model for any size home, whether bungalow or mansion—for any type of heating, warm air—hot water—or steam!"

"Check a few of the selling points of Oil-O-Matic Units—Oil-O-Matic takes less fuel, less servicing than any other make—AND lasts twice as long! I can back every word of this statement with proof.

"In the tremendous small home market, Oil-O-Matic with its Low Pressure Principle stands alone in its ability to use any grade of domestic fuel oil . . . including 100% catalytic . . . at firing rates as low as 1/2 gallon per hour.

"Oil-O-Matic units are compact to give homeowners more living space (there are units for installation in attics, closets—and for ceiling suspension!) Good-looking, too—my prospects like the clean lines, lustrous finish—and start making plans for a modern basement game room.

"Check just a few of the features that benefit my customers—The famous Counterflow Principle and the revolutionary new Double Radiant Transfer Principle of Oil-O-Matic Winter Air Conditioning Units . . . the high in-

verted V-bilt crown sheet, the extremely rapid water circulation, the rugged one-piece leakproof dome-to-floor construction of the B-Series steel boiler units . . . the staggered waterways, the open crown sheet and full water base design of the C-Series cast iron boiler units.

"These and many other features provide my customers with the tops in economy, dependability and long life.

"Check the kind of support Oil-O-Matic gives me—Plenty of co-op funds for my radio, newspaper, billboard advertising . . . strong, consistent national advertising . . . special campaigns to stimulate and help my salesmen all four seasons . . . factory training for my sales and service men—and a field representative who really works for me and with me.

"Yes, check the facts. You'll find that Oil-O-Matic's quality products and retail-minded thinking make my franchise . . . the best in the industry!"



There is a BIG difference

in Oil Burner franchises!

OIL-O-MATIC



For Oil-O-Matic franchise information, write

WILLIAMS OIL-O-MATIC DIVISION
Eureka Williams Corporation, Bloomington, Illinois

RANCHIEF

Town & Country

CONCO
heat

CONCO
heat



Modern HEAT FOR Modern HOMES

A COMPLETE LINE — Everything in oil, gas and coal-fired warm air heating. Conco-Heat gives you what your customers want!

FINEST QUALITY — Conco-Heat means real value — advanced engineering, finest materials and workmanship. Conco-Heat stays sold!

COMPETITIVE PRICING — Three lines give broad price coverage. You can sell both quality and price when you sell Conco-Heat!

MODERN STYLING — Streamlined cabinets, bright red enamel finishes Bonderized for permanence. Eye appeal means buy appeal!

FINANCIALLY SOUND — Conco-Heat is backed by 34 years of manufacturing experience and an AAA-1 financial rating.

Write today for complete details on the Conco-Heat line and franchise.

★ FIRE TESTED AT THE FACTORY ★ BONDERIZED FINISHES

RANCHIEFS

FOR RANCH HOMES

Nine models: Counterflows for under-floor-duct (Perimeter) heating, and Hi-Boys and Lo-Boys for basement or first floor installation. Designed for ranch type homes to combine extreme compactness, high efficiency, gleaming white enamel beauty. Pressure oil, vaporizing oil or gas-fired. All models convertible from oil to gas with no loss in capacity.



COUNTERFLOW RANCH-CHIEF, 64,000 BTU at bonnet, oil or gas-fired.



RANCHIEF HI-BOY, 70,000 BTU at bonnet, oil or gas-fired.

Town & Country

FOR LARGER HOMES

M Series and G Series winter air conditioners are furnished oil or gas-fired, and are convertible at any time from oil to gas. Ideal both for new and replacement business. The finest in heating for the finest in homes.



M SERIES, oil-fired conditioners, 80,000 to 185,000 BTU at bonnet. Convertible to gas.



G SERIES, gas-fired conditioners, 65,000 to 124,000 BTU at bonnet. Convertible to oil when desired.

Gravities

FOR BUDGET INSTALLATIONS

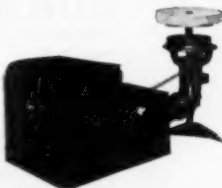
Conco gravity furnaces, oil or gas-fired, offer automatic heating of fine quality in the low price range. For conversion jobs the Conco Magic Spray Oil Burner and Conco Single Port Monoflame Gas Burner rank first for performance, quality, efficiency.



CONCO MAGIC SPRAY OIL BURNER, one to six gallon capacities.



CONCO SINGLE PORT MONOFLAME GAS BURNER, capacities up to 210,000 BTU input.



GO-70 gas gravity furnace, 70,000 BTU at bonnet.



PG1A-33, oil gravity furnace, 82,000 BTU at bonnet.

CONCO ENGINEERING WORKS

DIVISION OF H. D. CONKEY & COMPANY, MENDOTA, ILLINOIS

AFFILIATES: Materials Handling Division — Cranes, Hoists Conco Building Products, Inc. — Brick, Tile, Stone

HIGH EFFICIENCY



CONVERTIBLE ANYTIME FROM OIL TO GAS



Don't Be Caught SINGLE-FUELED!

BE READY FOR DOUBLE-BARRELED SALES!

with

**The SIEMON
COMBI-MATIC
DUAL FUEL
BURNER**



The SIEMON COMBI-MATIC is sweeping the country—just what the doctor ordered for **DEPENDABLE—ECONOMICAL—COMPLETELY AUTOMATIC** heating. This amazing new burner assures constant uninterrupted performance. Burns gas when supply is plentiful—switches to oil automatically when a gas shortage or failure occurs. You never lose a sale when you specify a **SIEMON COMBI-MATIC**. Made in sizes to fit all needs starting at 100,000 B.T.U. for domestic use and up to 100 horsepower for large commercial and industrial installations.

**ALSO INVESTIGATE
THE NEW SIEMON CONVERSION
GAS BURNERS**

Made in sizes for domestic use starting with 85,000

B.T.U. and up to 100 horsepower for commercial and industrial installations.



**Write for
Literature**

SIEMON and COMPANY

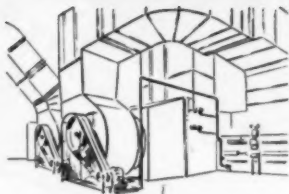
1819 Holmes St.

Kansas City, Missouri

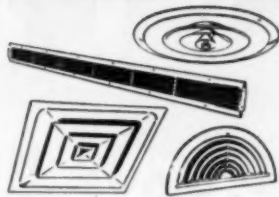
Remember these facts . . . and you'll always install Anemostat Air Diffusers



ASPIRATION PRODUCES DRAFTLESS COMFORT—The famous Anemostat aspiration and air expansion principles, illustrated and described below, distinguish Anemostat Air Diffusers from all other outlets and therefore assure the utmost in conditioned comfort . . . *no drafts . . . no stale air pockets . . . temperature and humidity instantly equalized.*



SAVE ON DUCTS AND FANS—You save on the initial cost of fans and ducts . . . and on the operating cost of fans . . . when you use Anemostat Air Diffusers. That's because these aspirating air diffusers permit the use of higher temperature differentials and higher supply air velocities than ordinary air outlets.



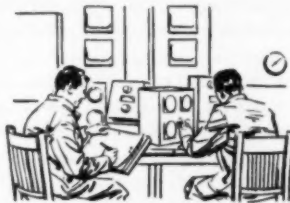
A TYPE FOR EVERY NEED—Round, semi-circular, square and straight-line . . . low pressure or high pressure! For every requirement there is a type and size Anemostat Air Diffuser exactly suited to your need . . . whether your designs call for ceiling or wall outlets . . . whether for comfort conditioning or industrial applications.



SPEEDY INSTALLATION—Anemostat Air Diffusers can be installed quickly and economically because of snap-on, ball-and-socket and other time-and-labor-saving features, depending on the type of Anemostat.



PREDICTABLE PERFORMANCE—You can count on precisely the air diffusion pattern you have selected because Anemostats are designed according to modern fluid flow theory and precision-manufactured to close tolerances.



PATENT-PROTECTED DESIGNS—Over a million dollars have been spent on research. Anemostat has protected its developments with more than fifty patents. That's why Anemostat is always a step ahead . . . why only Anemostat offers all these important features.

The PROOF!

MORE THAN A MILLION ANEMOSTATS are now providing quality air diffusion in commercial buildings, industrial plants, hotels, stores, hospitals, theatres, restaurants, homes, buses, ships, railroad cars, military and commercial aircraft.

These installations required the solution of a great many different air distribution problems. Take advantage of this experience. What may appear to be a new air handling problem has probably already been solved by Anemostat. Call in your local Anemostat Sales Engineer who is backed by a most experienced engineering department.

ANEMOSTAT®

DRAFTLESS Aspirating AIR DIFFUSERS

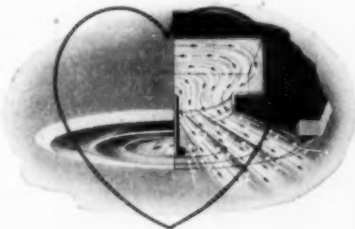
There is no "or equal"

ANEMOSTAT CORPORATION OF AMERICA

10 EAST 39th STREET, NEW YORK 16, N. Y.

REPRESENTATIVES IN PRINCIPAL CITIES

"NO AIR CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION"



THE HEART OF THE MATTER...

Anemostat's Exclusive Aspiration Effect

Due to its special design, the Anemostat distributes air of any duct velocity in a multiplicity of planes traveling in all directions. Simultaneously, the unit creates a series of counter-currents traveling toward the device which siphon into the device room air up to 35% of the supply air depending on the type and size of the unit. This room air is mixed with the supply air, within the Anemostat before the air mixture is discharged into the enclosure.

Penn

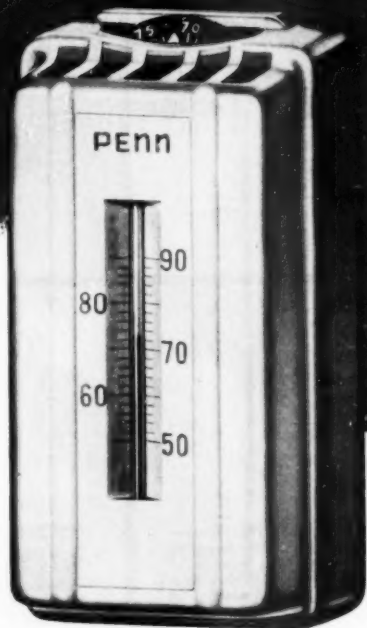


Low Installation Cost...simple, two-wire design saves time and money.

Low Service Cost...long-life, trouble-free performance reduces costly service calls...protects your margin of profit.

High Customer Satisfaction...results from truer heating comfort. Some call it "new"...some call it "magic." Penn called it 2-wire *Heat Anticipation* 17 years ago. And it's still tops on every type of heating system with every kind of fuel.

Add them all up and there's only one answer...*more profit for you*. That's the big reason leading burner manufacturers, wholesalers and dealers have put their "stamp of approval" on PENN. Don't settle for less...use PENN controls on your next heating job...they cost no more! **Penn Electric Switch Co., Goshen, Ind.** Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

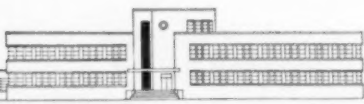


**Here's What Penn
Heat Anticipation
Does...**

- * Holds the temperature within one-half degree of selected level.
- * Avoids "cold 70"; ends discomfort of "zig zag" heating.
- * Automatically compensates for outside weather conditions.
- * Provides more frequent, short burner operations instead of longer runs and standby periods, assuring even flow of warmth for greater comfort and fuel economy.


It "hugs" the selected level for closer temperature control

Penn



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES



IF you don't
want to work
all your life...

You're in business to
make money (and so are we)...

And we believe that MOR-SUN means MORE MONEY for
you (and us)... Because MOR-SUN gives you *everything*
you need for a more profitable business...

That's right... more money for MOR-SUN merchandisers.
So if you don't want to work all your life... write, wire or
phone us (if you're in a hurry to retire)...

**MOR-SUN Pressed Steel Forced Air
and Gravity Furnaces...for GAS and OIL**

MOR-SUN FURNACE DIVISION

MORRISON STEEL PRODUCTS, INC.

601 AMHERST STREET • BUFFALO 7, N. Y.



"Sells on Sight"

REPAIR PARTS

FOR ALL
FURNACES, BOILERS
AND
OTHER HEATING UNITS



WE SPECIALIZE IN GENUINE REPAIRS

THE COMPLETE HEATING SUPPLY HOUSE
OFFERING ALL APPROVED BRANDS OF

ATTIC FANS
BOILER CEMENTS
BLOWERS
CLEANERS
CONTROLS
CONVERSION BURNERS
DAMPERS
DRAFT CONTROLS
FANS

FILTERS
FURNACE CEMENT
FURNACE PIPE
FURNACES, ALL FUELS
GAS BURNERS
HUMIDIFIERS
METAL SCREWS
OIL BURNERS
SMOKE PIPE

REGISTERS
ROOF COATINGS
SMALL TOOLS
STOKERS
UNIT HEATERS
VENTILATORS
WATER COILS
WATER HEATERS
WATER SOFTENERS

OUR INSULATION DIVISION

can supply insulation for all needs



ASBESTOS

Millboard
Paper
Pipe Covering

Tape
Cements
Boiler Covering

Ducts
Buildings
Roofs

Insulation for

Refrigerators
Boilers
Pipes

Featuring such well known brands as

NON-CON-DUX ASBESTOS PRODUCTS
"FIBERGLAS" "KAYLO" & "ULTRALITE"
UNIBESTOS

A. G. BRAUER SUPPLY CO.

2100 WASHINGTON AVE.

ST. LOUIS 3, MO.

START THE YEAR RIGHT! GET ALL THE FACTS ABOUT Thatcher '51 SALE-ABILITY!

THATCHER FURNACE COMPANY, Dept.
Garwood, New Jersey

We _____ are interested in selling

(Dealer's Name)

Please check: ☐ THE QUALITY CONSTRUCTION MARKET

☐ THE SMALL HOMES MARKET

☐ THE REPLACEMENT MARKET

☐ GAS UNITS

☐ OIL UNITS

☐ COAL UNITS

THE NEW THATCHER HOME HEATING LINE — ENGINEERED TO CLOSE MORE SALES!

☐ GA Series
Comfortmaster gas
winter air
conditioner for quality construction
and replacement. 54,000 to 130,000
BTU at reg.



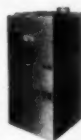
☐ Oilmaster
for quality
construction and
replacement.
Steam: 350 to
850 sq. ft.
Water: 645 to
1510 sq. ft.



☐ Triple Fire
All-Purpose
Boiler for coal,
oil or gas.
Steam: 280 to 640 sq. ft. Water:
450 to 1025 sq. ft.



☐ 491
gas winter air
conditioner.
Packaged for limited
space. 42,000 to 87,000 BTU at reg.



☐ 481
Series.
Coal-fired
winter air
conditioner,
convertible
to gas or oil. 70,000 to 240,000
BTU at reg.



☐ 492
Series oil
winter air
conditioner for
small homes.
43,000 and
80,000 BTU
at reg.



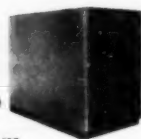
☐ 501-70
oil winter air
conditioner.
Packaged. For
compact
limited-space
homes.
70,000 BTU at reg.



☐ 502
gas gravity
warm air furnace
for new
construction and
replacement.
47,000 and
87,000 BTU at reg.



☐ V Series
Comfortmaster
oil winter air
conditioner for
quality new
construction and
replacement.
90,000 and
140,000 BTU at reg.



☐ Conversion Oil
Burners from 1/4 gal. to 20 gals.
per hr. Pedestal-Mounted.



Name _____
(PLEASE PRINT)

Address _____

City _____

State _____

Specialists in Heating since 1850

Thatcher
FURNACE COMPANY
Specialists in Heating Since 1850

The Oldest Name in Heating

GARWOOD, NEW JERSEY

WATER DROPS IN PAN—AFTER IT IS SIZZLING HOT...

... At pre-selected speed, water drips through funneled orifice into stainless steel pan. Water does no spray or run.

NO STAGNANT POOL TO RE-HEAT

Only a thin film of water forms in pan. Pan heats extremely fast. Water vapor is formed quickly—more efficiently.

EACH DROP OF WATER VAPORIZES AS IT HITS PAN...

Water drips into fast heating pan—one drop at a time—gets almost immediate vaporization.

1 KIT TO PURCHASE

All accessories are contained in one compact unit. Easily assembled. Economical to use—quick to sell.

12 PAN SIZES...

Quickly installed in any type warm air furnace.

SUPER-SENSITIVE THERMOSTAT...

Fool-proof. Gives immediate response to temperature change. Starts and stops flow of water according to bonnet temperature.

OUTSIDE SCREW ADJUSTER...

Easily reached. Permits fingertip control of water flow. Lock nut assures hairline regulation.

EASY INSTALLATION

Pans rest directly on combustion dome for most efficient operation. Can be suspended in plenum chamber, if necessary.

8 Ways Better

THERMO DRIP Automatic HUMIDIFIER

● Even with hardest water, Thermo-Drip gives fast, more efficient vaporization. Fool-proof thermostat permits quicker, more positive vaporizing action.

Simplicity of construction insures long life—easy servicing. There are no unnecessary parts—no extra, clumsy bulk. Too, with Thermo-Drip there is *no electrolytic action—no clogging of valve.*

Write TODAY for FREE literature. Dept. A-11

AUTOMATIC HUMIDIFIER CO. Cedar Falls, Iowa

Now... when **QUALITY** counts even more, You Can Count on the Complete **SECURITY LINE**



Yes, **QUALITY** has been the rule at Security for over 45 years . . . and will continue to be! Assure your customers of high efficiency performance, long years of service. Materials will be the best obtainable . . . workmanship will be by long-experienced Security craftsmen.

Security . . . is more quickly, easily installed. A type and size for every gas-fired heating requirement in the home.

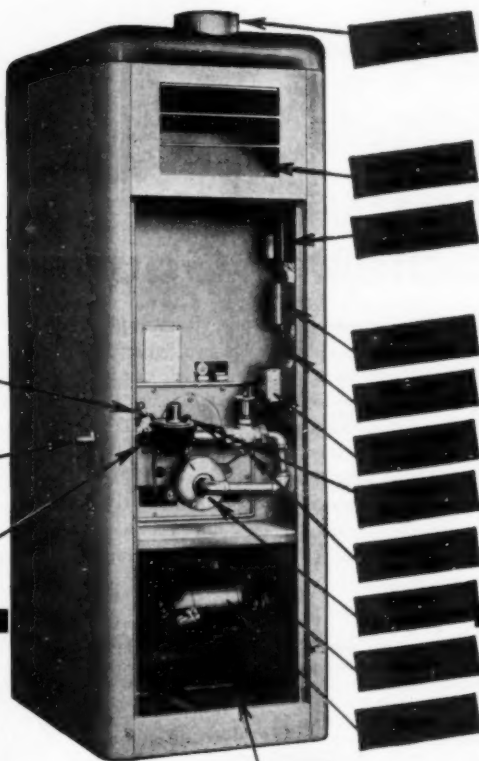


Security offers automatic gas-fired heating for every home purpose. New, shallow "Chubby" Floor Furnaces (above), revolutionary new **INN-A-WALL** series for compact forced air heating (left), and a complete selection of forced air and gravity furnaces. Security's Heavy Duty Water Heaters are long famous for efficiency, economy and long life.



Highest Efficiency with L-P Gas, Too!

Your customers can enjoy all Security products away from the city mains with L-P (Bottled) Gas. Simple, Safe, efficient. And so very convenient!



INPUT . . .
62,500, 80,000
100,000 and
125,000 BTU.

The Amazing

TWO-IN-ONE FURNACE!

Eliminate duplicate stock! Here's a factory-assembled, packaged forced-air gas-fired furnace that does every job. In closet or basement, this Security SFA series is ready to go into service on arrival.

All controls are located in one compartment. Quick adjustments.

easy replacements are expedited without disturbing other wiring. Return air duct connector for basement application is shipped knocked down. Attached to rear or sides in a jiffy. Built in filter racks.

Get all the facts — specifications, prices, discounts. Write today!

Security Mfg. Co., 1630 Oakland Ave., Kansas City 3, Mo.



**FOR
CLOSET
INSTALLATION**



**FOR
BASEMENT
INSTALLATION**

"We Give Our Customers the Best..."

KELLER
Engineering
COMPANY
405 West Essex Road, Rochdale, N. Y.
LYNGHURST, NEW JERSEY

October 25, 1950

Rochester Manufacturing Company
Rochester 10, N. Y.

Dear Mr. Skner:

We have used the Rochester Dual-Dial Oil Tank gauges exclusively for the past twenty years. While the initial cost may have been a little higher than others, we have found them to be more dependable and have had no difficulty with them.

This being a long-pull business, dependability and satisfaction to the customer has always been our aim. When you keep the customer cost down and keep him happy at the same time, the dealer saves on fewer service calls.

Very truly yours,
KELLER ENGINEERING COMPANY

W. Keller
W. KELLER, President

WK:

17 1/2" OIL BURNER - HEATING - 1/2" OIL



Rochester Gauges"

The dependability and positive leak-proof feature of Rochester "Dual-Dial" gauges are two reasons why oil burner dealers like Keller Engineering Company rely on them. The solid die-cast head cannot leak oil or vent smelly fumes *even under pressure!* Customers remain satisfied. Needless and costly service calls are eliminated. The large figures on the magnetically actuated "Dual-Dial" can be read at a glance from both front and back. There is never any doubt about oil level.

Underwriters' listed for over 25 years, Rochester Gauges are stocked for 275 gallon oil burner storage tanks in the following depths—22", 24", 26", 27", 42", 44", and 47"; 1½" and 2" pipe thread connections. Special lengths to order.

INCREASE PROFITS THIS WINTER! Here is an additional source of revenue for those slow winter months. Service unbalanced heating systems easily, quickly and accurately with a Rochester CAC (Circulation Air Control) Kit. Use it to build customer good-will and increase your own profit.

This inexpensive Kit contains three accurately calibrated Rochester Thermometers with self-supported tapered shafts. You can take simultaneous readings and since no tools are required, your hands are free to make necessary adjustments.



Rochester
GUARANTEED ACCURACY

MANUFACTURING CO., INC.

19 Rockwood St., Rochester 10, N. Y.



1. AAF ENGINEERED!

Designed by the acknowledged leaders in air filtration, AMER-glas Filters are better filters—extra-resilient body for longer service . . . continuous, inter-laced white glass filament . . . thermo-plastic bond. Patented viscous coating increases dirt-catching efficiency.



2. HOSPITAL-WHITE!

AMER-glas filters are "hospital-white" . . . look clean . . . outsell other leading brands on eye-appeal alone. See for yourself! Slip an AMER-glas filter in the colorful 3 dimensional display . . . then get set for extra sales, extra profits!



3. SMOOTH TO TOUCH!

AMER-glas filters are easy (and more pleasant) to handle. No prickly slivers, no unpleasant odor, no "greasy feel". You and your customers too, will appreciate this clean-looking, clean-feeling filter.



4. SELLING AIDS!

AMER-glas filters offer you complete selling aids—envelope stuffers, counter displays, window streamers, newspaper ads, radio spots. All material is customer-tested, sells "health", "fuel savings" and "easier housecleaning".



5. BIG-VOLUME MARKET!

There is an enormous and growing market for AMER-glas filters right in your own back yard. More than half of all warm air furnaces now being installed are forced-air units (in some areas, nine out of ten).

5 reasons why AMER-glas

REPLACEABLE AIR FILTERS

mean more money in

Your Pocket!



The
HOSPITAL-WHITE
Filter



the AMER-glas distribution policy

AMER-glas filters are sold only through leading distributors, each servicing his dealers in the usual manner. For the further convenience of dealers and distributors, there are American Air Filter Company Representatives in 65 principal cities (listed under "Air Filters" in your classified telephone directory).

MAIL TODAY!

AMERICAN AIR FILTER CO., INC.
335 Central Ave., Louisville 8, Ky.

Please send me complete information on AMER-glas Replaceable Air Filters. Show me proof of the profits!

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

AAF

An Engineered product of
American Air Filter
COMPANY, INC.

LAU

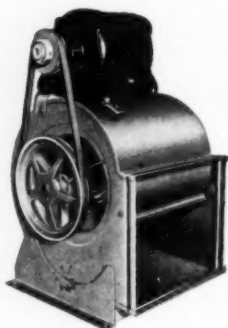
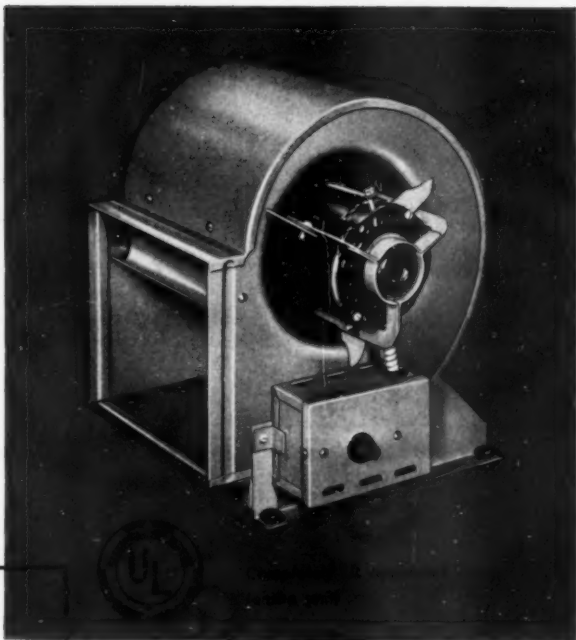
offers you the ALL NEW, refined and improved

Small, compact, efficient and quiet

A 7½" Double Inlet Blower with motor built INTO the Unit!

The ALL NEW LAU A7-DD pictured here is the perfect unit for in-a-wall gas and oil furnaces. It is the one answer to manufacturers who build hi-boy, low-capacity units. It is the ONLY unit completely UL approved, covering the entire unit (also approvable in combination with furnace).

The A7-DD has fingertip adjustment for wide range 7-speed control. For furnaces to be rated at capacities from 44,000 to 76,000 b.t.u. per hour (bonnet) at 100° temperature rise—or capacities from 31,000 to 54,000 b.t.u. per hour (bonnet) at 70° temperature rise.



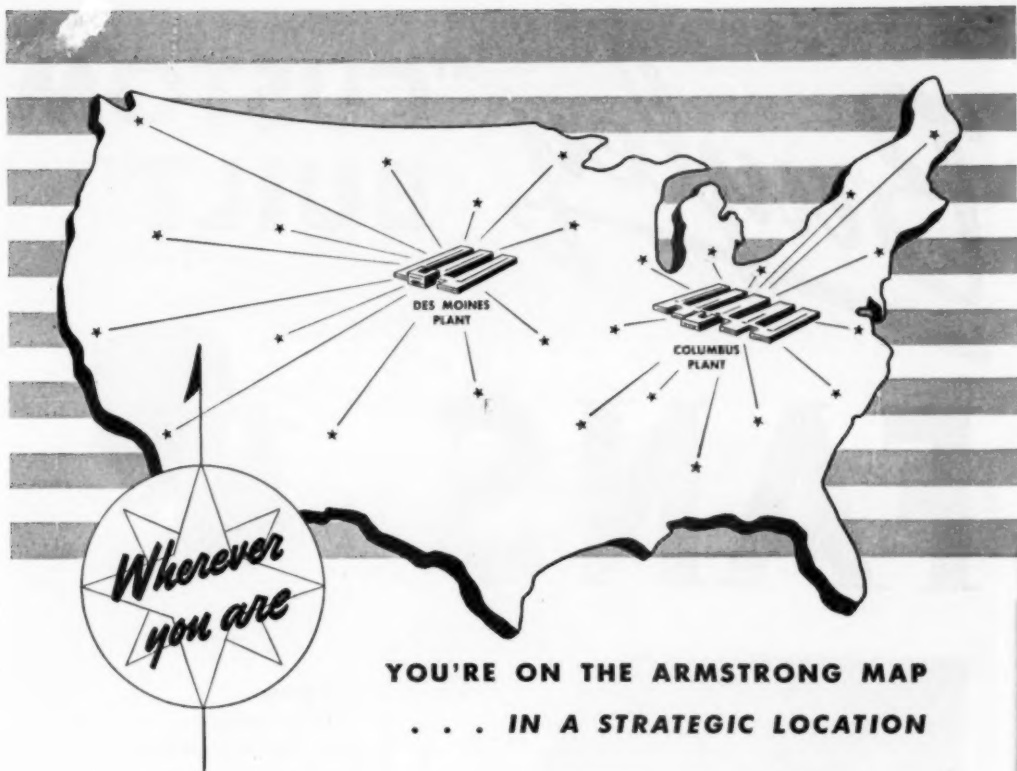
Write dept. AA
for full
information

Lau Series "A" blower assemblies

The all-time outstanding achievement in the blower field. Overall size is considerably smaller than formerly and many features are revolutionary—exclusive with Lau—and protected. Entire unit is die-formed, lending itself to mass production on precision-built equipment with reflected low costs. Has 1-pc. motor mounting, self-aligning bearing, new LAUsteel pulley wheel. Write for Catalog 602 giving complete dimensions and performance data.

THE LAU BLOWER COMPANY • DAYTON 7, OHIO

Visit our booth No. 533—10th International Heating and Ventilating Exposition—Philadelphia, January 22 to 26.



In days of short supply it's important that you get yourself into the best possible position in regard to the supply of the furnaces you sell. Important? *Essential!*

Look at the Armstrong distribution map. Two huge plants to serve both sides of the continent quickly, economically. A warehousing distributor within a stone's throw of *everywhere*. In normal times that means quick action on deliveries . . . kills the need for heavy dealer inventories. It means close-at-hand sales and engineering help.

In times of tight supply it means the close, personal contact which lets you *know* you're getting a square deal. And when supplies are tight, a nearby jobber's inventory becomes even more important.

It's good to know, too, that Armstrong is one of the biggest. If steel is obtainable Armstrong will get

its full share. That's true if materials are assigned on the basis of past volume, present orders or future prospects. These materials will continue to be applied to a full selection of warm-air furnaces—for firing with gas, oil or coal.

Get set *now*. Get ready for rough going. Be *sure* you're in the right supply spot. Drop us a line, or mail the coupon below.



Armstrong Furnace Company: We'd like to know more about what you can do for us, especially in times of tight supply. And let us have the equipment information checked.

PLEASE SEND ME:

☐ BULLETIN 505, which describes the Armstrong gas-fired winter air-conditioner.

INFORMATION ON ☐ COAL ☐ OIL ☐ FULL LINE

Name

Company

Street

City & State

ARMSTRONG Furnace Company

COLUMBUS, OHIO—DES MOINES, IOWA

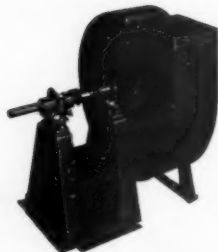
Please address Dept. AA at our plant nearest you

Warm-Air Furnaces—Gas, Oil, Coal—A Complete Line

Bayley

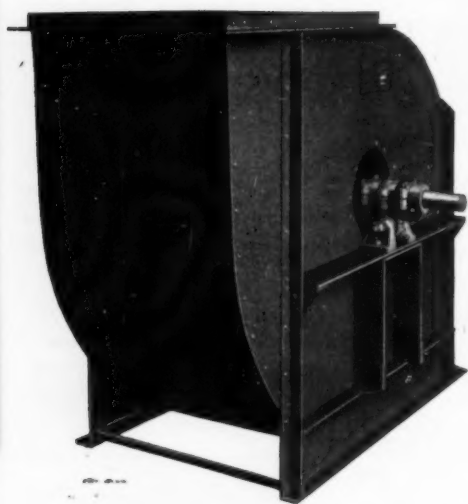
"CUSTOM BUILT"

FANS



FOR

- HEATING
- VENTILATING
- AIR CONDITIONING
- MECHANICAL DRAFT
- INDUSTRIAL EXHAUST



Yes, — there's no need to accept makeshift fan selections, when the Bayley lines offer a complete range from which to choose. There's a type and size particularly suited to each application, from small vent sets for general utility ventilation to the largest heavy duty mechanical draft fans. Choice of "squirrel-cage", non-overloading, radial or special wheels, according to service requirements. Available in all suitable drive arrangements.

But, — you don't have to sacrifice delivery time to take advantage of "custom" selectivity. Bayley pre-engineered designs make it possible for you to pick your fan and have it too. Pre-fabricated components for the most popular types and sizes facilitate prompt deliveries of completely assembled fans in rotation and discharge selected.

**SPECIALISTS IN AIR HANDLING EQUIPMENT
FOR OVER 50 YEARS**

**CONSULT US ON YOUR ENGINEERING PROBLEMS
BAYLEY BLOWER CO.**

1817 SOUTH 66TH STREET

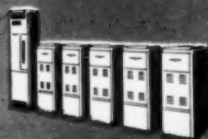
MILWAUKEE, WISCONSIN

A Rising Star

NORGE HEAT



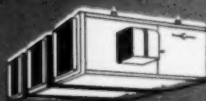
6 Sizes Gas Lowboy
60—220 M/B.T.U.'s



6 Sizes Gas Hi-Boy
62.5—120 M/B.T.U.'s



4 Sizes Gas Gravity
75—150 M/B.T.U.'s



3 Sizes Gas Stowaway
100—225 M/B.T.U.'s



5 Sizes Oil Lowboy
80—180 M/B.T.U.'s



4 Sizes Oil Hi-Boy
70—120 M/B.T.U.'s



5 Sizes Oil Gravity
50—120 M/B.T.U.'s



3 Sizes Oil Stowaway
90—180 M/B.T.U.'s



15 Sizes Cool Gravity
& W.A.C.'s 20—27 in.



Oil or Gas Square Boilers
5 Sizes to 1440 sq. ft.



Oil or Gas Round Boilers
5 Sizes to 1440 sq. ft.



Gas or Oil Water Heaters
22 Models, 20—66 gals.



Conversion Gas Burners
2 Models, 50—200 M/B.T.U.'s



Conversion Oil Burners
2 Models, 50—200 M/B.T.U.'s

NORGE HEAT

Division of Borg-Warner Corporation

Living's a treat with Norge Heat



DELCO-HEAT UNITS ARE PRODUCTS OF GENERAL MOTORS



... That's why this
outstanding gas-fired line is tops in value,
in dependability and in engineering features!

Here is everything you want in gas-fired, forced warm air furnaces—the new Delco-Heat "GA" series of Conditionairs! The line includes five models with input capacities of 62,500, 90,000, 120,000, 150,000 and 210,000 Btu—available with either 12 or 16 gauge steel heat exchangers. All models have been AGA-approved for natural, artificial and mixed gas fuels—for LP and LP-Air gas and for high-altitude

installations.

The "GA" Conditionair has the exclusive welded-steel Multi-Rad heat exchanger system—ribbon-type burners—and a blower-filter unit powered by Delco Appliance's famous Rigidframe motor. The units are extremely good-looking in their Delco-green finish—compact and trim—without exterior draft hoods or exposed gas controls. Competitively priced—unmatched for value!



**New DELCO-HEAT conversion gas burner covers
range from 75,000 to 300,000 Btu input!**

The Delco-Heat gas burner is an up-shot, single-port type, with a stainless-steel flame spreader that directs the flame evenly and efficiently to all sides of the combustion chamber. Air and gas are mixed for perfect combustion through a telescopic venturi tube. This telescopic feature, plus the adjustable orifice and simplified over-all design, make its installation in any furnace or boiler extremely easy.



The new Delco-Heat gas burner is AGA-certified for natural, artificial and mixed gas fuels. Amazingly low in first cost, economical to operate, and built for years of service—the Delco-Heat Burner is today's greatest value in gas conversion burners!

Also manufacturers of gas and oil water heaters and electric water systems for farms and houses.

**It's easier to sell Delco-Heat products
than it is to sell against them!**

The Delco-Heat line includes oil, gas and coal-fired units . . . for warm air, steam or hot water systems . . . for all sizes of homes. Engineered right, priced right! If you are interested in the profit possibilities of the Delco-Heat franchise, send coupon now!



DELCO APPLIANCE DIVISION

General Motors Corporation
Rochester 1, New York

Dept. AA-20

Please send me information about the Delco-Heat franchise.

Name

Firm Name

Street

City Zone State

PUSH DUST STOP FILTERS NOW!

Get easy profits now while the DUST-STOP Air Filter season is booming. People who forgot filters in the fall want 'em now. Others are ready now to buy their second filter replacement for cleaner homes, better heating, lower fuel bills.

Displays, stuffers, post cards are available to help you cash in on DUST-STOP, the *nationally advertised, fast-turnover* air filter. Ask your wholesaler for them. Or write Owens-Corning Fiberglas Corporation, Department 35-A, Toledo 1, Ohio.

It pays to push the original . . .

OWENS-CORNING
FIBERGLAS

DUST STOP

AIR FILTERS



*DUST-STOP is the trade-mark of Owens-Corning Fiberglas Corporation for impingement-type air filters made of glass fibers. FIBERGLAS is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.



● Because of the unique combination of high product quality and direct sales method, the DOWAGIAC PLAN brings dealers solid, lasting prosperity. The Dowagiac dealer buys high quality products direct from the factory... sells at prices that meet or beat competition... makes a higher unit profit for himself... and retains the independence of *running his own business* in every respect. Unusual as it is, the DOWAGIAC PLAN has been in operation for nearly two decades.

HERE'S WHAT DOWAGIAC DEALERS ENJOY

- ★ Product quality that has earned and held the confidence of both dealer and customer.
- ★ The prestige of the famed DOWAGIAC name... a name long known for years of satisfaction.
- ★ A full range of sizes for small and large homes, in types properly engineered for all fuels.
- ★ Really outstanding VALUE to the customer... value made possible by the DOWAGIAC direct sales plan.
- ★ PRICES... size-for-size and type-for-type... that enable the DOWAGIAC dealer to meet and beat competition.

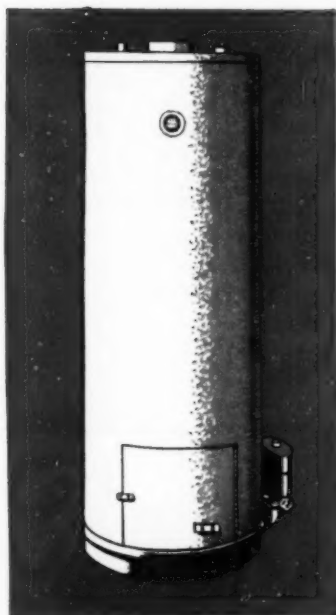
... And it's all made possible by the unique DOWAGIAC combination of direct sales plan and high product quality... quality upon which Dowagiac dealers can *depend*—in 1951 just as they did in 1950.

Combination.

DEPENDABLE PRODUCT QUALITY PROFITABLE DIRECT SALES PLAN

A Complete Line of Furnaces Winter Air Conditioners and Water Heaters for all Fuels

In design, engineering, materials, and rugged construction, you can't find a better line than DOWAGIAC. There are models for all fuels... A full line of sizes... Standard round casings or modern enameled casings... All famed for easy installation and efficient performance. *This high quality will be maintained!*



Now, to product quality, add the benefits of a profitable *direct* sales plan, and you have a unique combination. You buy the famed DOWAGIAC line better, so you can sell it better. You buy direct from the factory, and the important savings are passed on to YOU, resulting in lower prices to customer and higher profits for you!

DOWAGIAC Water Heaters are available in electric and oil-burning types... every one engineered for easy installation and years and years of fine performance. Electric: 30 to 80-gal. sizes. Oil: 20 to 65-gal. All "Underwriters" approved. All with white, baked enamel casings.



The illustration above is typical of the better finish and appearance of all DOWAGIAC Furnaces and Winter Air Conditioners in the blue Hammeroid enamel—whether for oil, gas, or coal. Neatness, compactness, and the fine performance assured by expert engineering have earned far flung recognition for DOWAGIAC products.

DOWAGIAC

Steel Furnace Company

DOWAGIAC MICHIGAN

New
WASHINGTON
Frugal
GAS FLOOR FURNACES



GRAY & DUDLEY CO., Dept. AA
 Nashville 3, Tenn.

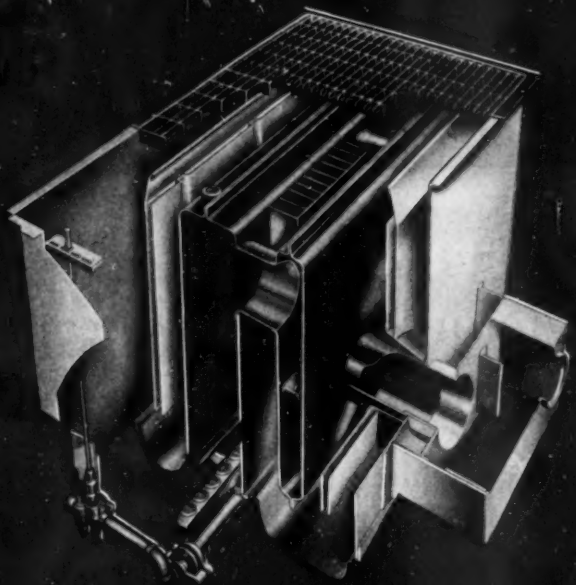
Gentlemen:

Please send me information on WASHINGTON FRUGAL GAS FLOOR FURNACES.

NAME

COMPANY

CITY ZONE STATE

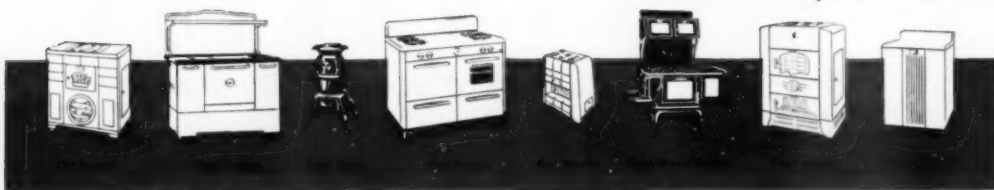


Washington Frugal Gas Burning Floor Furnaces are available for low cost housing construction requiring no basement, excavation, expensive plumbing or air ducts, these units are factory assembled for quick, easy installation. Input ratings are 35,000 B.T.U., 50,000 B.T.U., and 70,000 B.T.U. for natural or manufactured gas, slightly lower for bottled "LP" gas. Sizes range from 32" x 22" to 42" x 24" overall. All models are equipped with rust proof burner ports and Baso 100% Safety Shut-off Valve with Pilot. The outer casing is of heavy gauge steel, triple coated to resist corrosion. All units are current A. G. A. approved and carry a ten year guarantee not to rust or burn out.

Established 1862

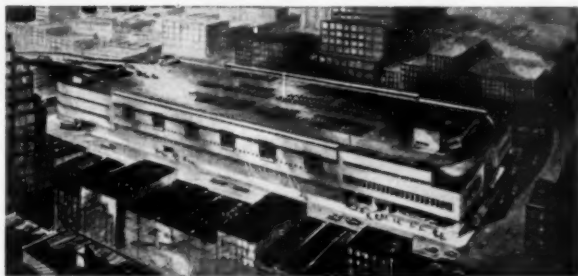
GRAY AND DUDLEY CO.
 Nashville 3, Tenn.

The most complete line!



...the Port Authority Bus Terminal

representing the most advanced
architectural and engineering practices



Grant Wilson DUX-SULATION

the "engineered"
duct insulation that insures
less temperature loss
between source and outlet

*Dux-Sulation is just as practical for a small heating or air conditioning installation as it is for the world's largest Terminal shown above. A thermal/acoustical insulation designed expressly for duct application, Dux-Sulation steps up the overall efficiency of any system involving the transfer or travel of heated or refrigerated air. K Factor is .27 BTU and sound absorption is approximately 61%. Installation is fast and simple, and insulating values are constant.

Inspect Dux-Sulation yourself. A handy sample kit and complete engineering data is yours for the asking. Write Grant Wilson, Inc. for Kit No. 531-8 to Board of Trade Bldg., Chicago 4, Ill.



Photo of duct section in new terminal insulated with Grant Wilson Dux-Sulation.



Grant Wilson inc.
ASBESTOS and INSULATING MATERIALS



DELCO MOTORS

*Right —
for Heating and Ventilating*



MOTORS FOR OIL BURNERS

Delco flange-mounted motors, split-phase, 50- and 60-cycle, constant speed— $\frac{1}{6}$ - to $\frac{1}{4}$ -horsepower ratings.

There are Delco motors just *right* for the job—motors specifically designed for oil burner applications, and motors specifically designed for belt-driven blowers and fans used in heating, air conditioning, and air filtering systems. All these motors conform to NEMA and other established standards of efficiency, safety, long life and quiet operation. And all are Thermotron-protected against damage from stalling, overload, and faulty power supply.



DELCO MOTORS

DELCO PRODUCTS

Division of General Motors Corporation • Dayton, Ohio



MOTORS FOR BLOWERS

Delco resilient-mounted motors, split-phase and capacitor-start types, single- and two-speed designs— $\frac{1}{6}$ - to $\frac{1}{4}$ -horsepower ratings.

NOTE TO MANUFACTURERS:

There are Delco offices located in Chicago, Cincinnati, Cleveland, Detroit, Dallas, Hartford, Philadelphia and St. Louis.

SEE YOUR LOCAL AUTHORIZED DEALER

**SOMETHING TO REMEMBER
WHEN SELECTING A
HUMIDIFIER FOR MODERN
WARM AIR HEATING
SYSTEMS**

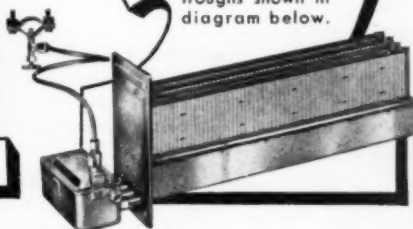
ONLY MAID-O'-MIST CONVECTOR HUMIDIFIERS OFFER THESE 3 BIG ADVANTAGES

50% less INSTALLATION TIME!

Just cut out opening in plenum, attach plenum flange frame, slip in factory assembled unit and make water connections — that's all.

30% more EVAPORATING AREA!

Due to unique design of water troughs shown in diagram below.



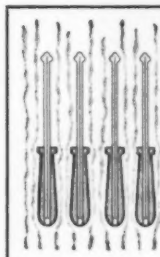
60% less AIR RESTRICTION IN THE PLENUM!

Permits use in small plenums of modern warm air furnaces.

Pre-assembled unit cuts installation time in half!

To make it easier for you, Maid-O'-Mist assembled all the parts of these convector humidifiers here at the factory. The only thing you have to do is cut the proper size opening in the plenum, attach the plenum flange frame, and make the necessary connections. No tedious fitting or fastening to the back of the plenum. The unit is entirely supported by the flange frame in front.

And remember, Maid-O'-Mist convector humidifiers can be fitted to either vertical or sloping bonnet furnaces. There's a type for every installation, permitting adjustment of up to 30° pitch for sloping bonnet furnaces.



Free flow of heated air

between evaporation pads and all sides of humidifier is shown in diagram. This exclusive design reduces air restriction 60%. Also puts every inch of the humidifier to work. Actually provides 30% greater evaporating area.

Available in 13 different sizes!

Maid-O'-Mist Convector Humidifiers have evaporation capacities of 1 to 10 gallons of water per day, depending on size. Made entirely of non-ferrous metal and equipped with automatic (float-operated) supply

valve. You can recommend Maid-O'-Mist to your customers with assurance . . . you can install Maid-O'-Mist with ease, speed and profit. Get full information from your jobber, or write for Bulletin 701-B.

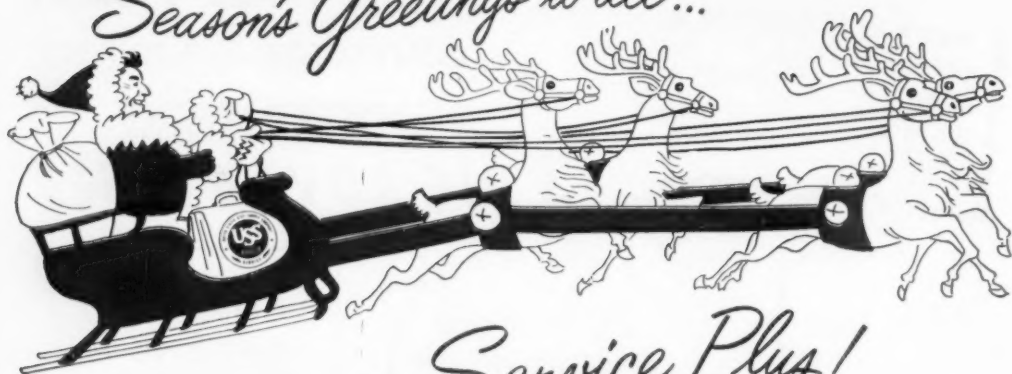


**AUTOMATIC HUMIDIFIERS AUTO-VENTS
WATER LINE CONTROLS . HEATING SPECIALTIES**

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD . CHICAGO 41, ILL.

Season's Greetings to all...



and to all, Service Plus!



• "I'm the United States Steel Supply representative who visited or phoned you during 1950. May I say 'Thank you' for receiving me so courteously, and wish you the very best of personal joy and business success during the coming year.

"1951 is going to put service to a severe test. Limitations which are industry-wide and beyond our control, will definitely effect service on critical steel products. Rest assured that reliable steel suppliers will not make rash promises that cannot be fulfilled.

"My full-time job during 1951 will be to serve you in every way possible. I will do my best to supply you with the steel you need, offer you substitutes when they are practical, and place at your disposal the services of our product technicians and metallurgical division.

"In other words, when you need help in 1951, I'm your man. I hope you will use me."

BARS • PLATES • FLOOR PLATE • STRUCTURALS • SHEETS • STRIP • REINFORCING BARS
STAINLESS • ALLOY STEELS • ALUMINUM
TOOLS • EQUIPMENT • MACHINERY

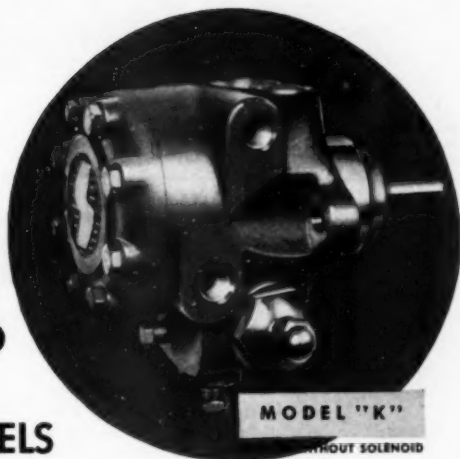
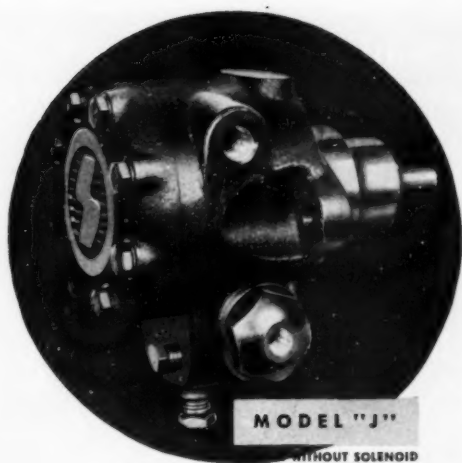
UNITED STATES STEEL SUPPLY COMPANY



Warehouses and Sales Offices: BALTIMORE • BOSTON • CHICAGO
CLEVELAND • LOS ANGELES • MILWAUKEE • MOLINE, ILL. • NEWARK • PITTSBURGH
PORTLAND, ORE. • SAN FRANCISCO • SEATTLE • ST. LOUIS • TWIN CITY (ST. PAUL)
Sales Offices: INDIANAPOLIS • KANSAS CITY, MO. • PHILADELPHIA • ROCKFORD, ILL. • TOLEDO
TULSA • YOUNGSTOWN

WHEN YOU DEAL
WITH US, YOU GET
**Service
Plus!**

UNITED STATES STEEL



TAKES ONLY THESE TWO BASIC SUNDSTRAND MODELS TO SOLVE EVERY FUEL UNIT PROBLEM

How much simpler it is for you, how much more efficient when you let this streamlined Sundstrand line of fuel units meet all your needs. Whether for new equipment installations or replacements you have the proper fuel unit for any domestic oil burner when you use Sundstrand Model "J" or "K".

Both are available with or without solenoid . . . both are made in five sizes with maximum nozzle capacities of 3, 6, 9, 14 and 20 GPH. And both feature the new Sundstrand

anti-hum diaphragm, hydraulically equalized Rota-Roll pumping members, easily removed, positive-seating strainer.

Model "J" is a *single-stage* unit . . . Model "K" is a self-purging *two-stage* unit engineered for long lines and high lifts. Thus, with these two basic Sundstrand fuel units, you have the exact capacity needed, the precision manufacture and the proven long life which all add up to better, quieter performance and simplified field service—for *every* installation. Write today for free data.



SUNDSTRAND FUEL UNITS

SUNDSTRAND MACHINE TOOL CO.
HYDRAULIC DIVISION, ROCKFORD, ILL.



New Viking Humidifier Counter Display

"Viking '2300' Humidifier Cuts Inventory Investment."



JOHN PHILLIPS,
Stelwagon Mfg. Co.,
19th & Washington Streets,
Philadelphia, Pa. says:

"With the simple addition or subtraction of evaporating plates, the Viking '2300' Humidifier can satisfy the requirements of practically any size home. I no longer

have to stock a great number of sizes. This simplifies my entire operation—saving in storage space, record keeping, sales effort and investments."



BUD MEHR, Nat'l Heat & Fuel,
1321 Walnut St., Camden, N. J. says:

"The famous Viking quality construction is evident all through the '2300' Humidifier. The dependable puncture proof Foam Glass Float, the Hard Chromed Top Seat Valve and the general high quality construction give me the reliable type of product I like to sell."

"PHILADELPHIA Dealers Find
Viking's New '2300' Humidifier
Sells Fast because . . .

Customers See the Benefits They are Buying."



Says E. B. "EB" COOK,
Viking Representative

Here's Why These Dealers Stock Viking's "2300" Humidifier

JAMES W. HAMMOND,
James W. Hammond Heating Co.,
427 Charmont Ave., Folcroft, Pa. says:

"Viking's '2300' Humidifier has the evaporating capacity for any of my jobs. It is surprisingly compact (only 12" long) and fits even the smallest plenums. I can sell this humidifier with confidence because I know I can handle any job with it."



JOHN J. CLEARY,
Phila. Roofing & Heating Co.,
1620 W. Erie Ave., Phila., Pa. says:

"When I sell a Viking '2300' Humidifier I'm sure of my profits because I don't have to make expensive service call-backs. Viking's rugged and simple construction makes it practically foolproof."



GEORGE E. SPENCE, Geo. E. Spence Co.,
20th & Pine Sts., Philadelphia, Pa. says:
"The Viking '2300' Humidifier is the quickest and easiest installation I make. Under ideal conditions I can make an installation in as little as 20 minutes. It doesn't require special skills and tools. It's one-time labor cost. Call-backs are practically eliminated."



Viking

AIR CONDITIONING CORP.
5601 Walworth, Cleveland 2, O.



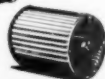
FANS



BLOWER
ASSEMBLIES



HUMIDIFIERS



BLOWER WHEELS



PACKAGE
BLOWERS

WALKER

DRAFT REGULATORS

by Trade Standards

There's no hesitation when architects, engineers and heating men need a draft control to do a job RIGHT. They specify WALKER . . . long known as the standard of quality.

From the small Space Heater to the giant Industrial Boiler, Walker Controls assure maximum fuel combustion under all stack conditions. That prevents unnecessary heat loss up the chimney . . . gives up to 25% fuel saving and increases all around heating performance.

What's more, there's a Walker Regulator for every domestic and commercial need . . . sizes from 6" to 36". Each is easily installed, guaranteed and sensitive for a lifetime.

Get all the facts on the Walker line to draft controls NOW without obligation to you. Write today to:

WALKER MFG. & SALES CORP.

Dept. 403 1701 Penn St., St. Joseph, Mo.



**WITH THE AMAZING
NEW FRICTION FREE
BOX HINGE**

Seals bearing points from soot, moisture and rust. Won't clog or stick. Maintains positive draft values exactly as adjusted.

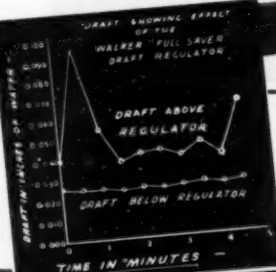
**Over 7,000,000
IN USE**

Check These
Performance Charts



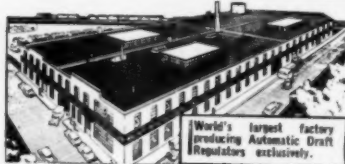
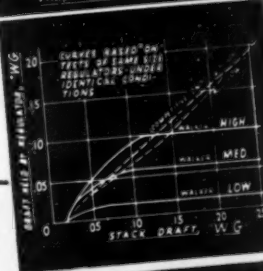
WALKER TYPE 34

For any type domestic furnace, stove or hot water heater. Sizes from 6" to 20". Shown with installation collar. Damper section available separately if desired.



WALKER TYPE 34B

Adjustable, junior model. Sizes 3" to 7" available complete with tee joint. Dampers 3" to 10" available with collar. Adjustment range—.01 to .12 inches WG.



World's largest factory producing Automatic Draft Regulators exclusively.

We are not competing directly or indirectly with the producers of any type of heating equipment.

WALKER TYPE 34C

Dial and pointer screw adjustment, junior model. Sizes 4, 6, 7, and 8 inches. Range in draft values: low-.015, medium-.045, high-.07 WG. Other draft values furnished to order.



WALKER TYPE 34PS

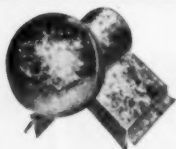
Pre-set at factory for one value, junior model. Sizes 8" to 8". Standard draft setting is .04 inches WG. Special controls can be furnished to manufacturers specifications.



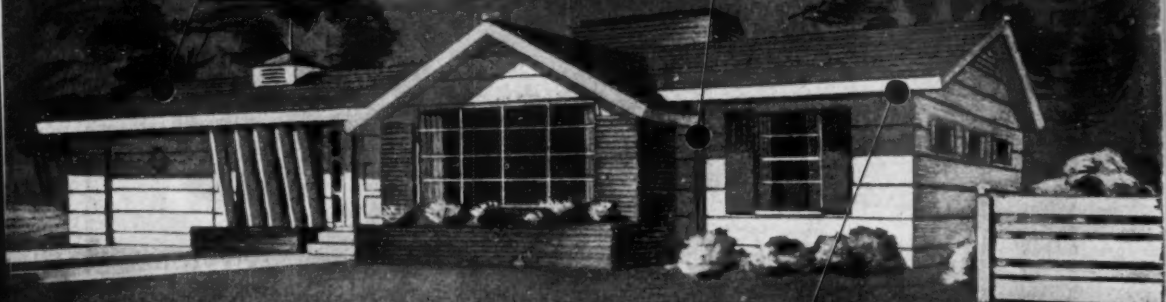
**COMMERCIAL and
INDUSTRIAL**

For apartments, schools, industrial plants, garages, and other commercial uses. Ball Bearing. Sizes from 16" to 36".





Milcor Galvanized Globe Finial provides an attractive terminal for ridge roll. Easily installed, easily adjusted to pitch. Tight-seam construction — no soldering or welding.



MILCOR



Tite-Lock Gutter Hanger fits all makes of half-round gutter perfectly. Girdles gutter for snug, tight fit and positive, permanent lock. Long arm punched for 3-nail anchor to roof. Also available to fit 4", 5" and 6" Milcor square gutter.

You can depend on Milcor products for all of your roofing needs. They cut hours from your assembly time — and assure you a good-looking job that lasts.

The complete Milcor line includes: conductor pipe, elbows, cut-offs, funnels, strainers, eaves trough, mitres, ends,

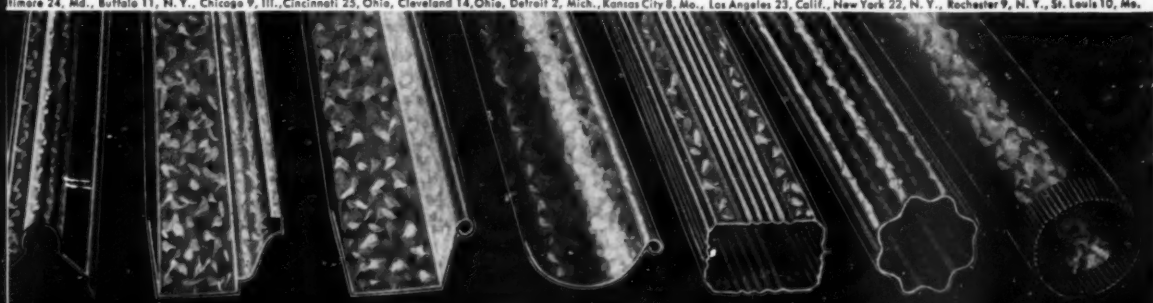
shanks, roof and box gutter, roll and formed valley, ridge roll, hip finish, finials, barn battens, flashing shingles, roof edge, eaves drip, etc. — plus roofing accessories and tools. Roof your next job faster, better with Milcor. Write for a Milcor gutter, conductor-pipe and accessories catalog today.

INLAND

Formerly Milcor Steel Company

4023 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

Birmingham 24, Ala.; Buffalo 11, N. Y.; Chicago 9, Ill.; Cincinnati 25, Ohio; Cleveland 14, Ohio; Detroit 2, Mich.; Kansas City 8, Mo.; Los Angeles 23, Calif.; New York 22, N. Y.; Rochester 9, N. Y.; St. Louis 10, Mo.



News Round-Up



New Steel Mark Set

STEEL PRODUCTION IN 1950 soared to an all-time record of about 97,000,000 tons of ingots and castings, breaking the previous top set in the war year of 1944 by 10 million tons. The 1950 figure is an estimate by the American Iron and Steel Institute. It compares with 89,642,000 tons in 1944 and 77,978,000 in 1949.

The 1950 output is far ahead of the peace-time record of 88,640,000 tons, set in 1948.

Industry on Television

GENERAL CONTROLS, manufacturer of automatic pressure, temperature level, and flow controls, inaugurated a new kind of television program in Southern California on Friday evening, November 24th in the first of a series of industrial "Success Stories".

The TV show, beamed at the 800,000 set-owning families in Southern California, was telecast by station KTTV and sponsored by the Richfield Oil Corp.



J. F. Ray, at left, describes products.

"Success Story" will take televiewers behind the scenes of the important plants and factories that have made Southern California an industrial power in this nation.

During the hour-long public service telecast, KTTV cameras took the audience through the huge General Controls plant, probing into the many operations that result in the firm's precision control products. At-home

TV viewers saw long lines in which automatic valves are assembled, the giant punch presses, and the banks of automatic screw machines. Announcer Keith Hetherington, accompanied by General Controls vice president in charge of sales, J. F. Ray, interviewed a number of plant workers, discussing their individual operations and such General Controls high points as the production incentive plan for employees.

A feature portion of the program saw the cameras train their eyes on the long thermostat assembly line.

Canadian Institute Meets

TENTH ANNUAL CONVENTION of the Canadian Institute of Stove and Furnace Manufacturers was held at the Chateau Frontenac, Quebec City, Dec. 4 to 7 inclusive, with approximately fifty delegates on hand.

Main topic of interest was the tightening steel supply situation. A five-man special emergency committee was elected for dealing and co-operating with government agencies in this connection. The Minister's Order No. 1, covering restriction of the use of steel for certain specified structural purposes was reviewed, as was the regulation requiring a certificate from purchasers showing the end use to which steel will be put.

A. C. Croft, president of the National Foremen's Institute of the U. S. A. addressed the meeting on its first day on: "Human Relations is Good Management." In a down-to-earth style, Croft stressed the importance of good human relations in the job facing management in the immediate future.

A. P. Palmer, personnel manager at Dominion Foundries and Steel Limited was another featured speaker on the Institute's interesting program. Palmer's talk, entitled "The Dofasco Way," covered the profit-sharing plan in use at his company—a plan which has met with highly satisfactory acceptance by all employees. The plan is based on a move from the top, from management, to reduce the gap between management and the average worker in the plant.

Newly-elected officers and directors for 1951 are: A. L. Acton, president; F. R. Rand, vice president; F. C. Clare; F. W. Crossley; H. A. Gauvin; G. I. Harrison; M. J. Kennedy; O. E. Loberg; C. I. Mills; A. G. Salmon; F. A. Simpson; J. P. Thibault, directors.



THOUSANDS OF NEW YORK and New Jersey homes that were without heat during below-freezing temperature as a result of the recent disastrous east coast storms and floods, were given quick relief because of fast action by the Webster Electric Co., Racine, Wis. manufacturers of ignition transformers for oil heating systems.



Louis Ehrich, service manager, chats with the pilot while the plane is loaded with its emergency cargo.

Upon learning of the existing flood conditions, regular production of transformers was stopped and facilities concentrated on manufacturing transformers to replace those damaged in water-flooded basements in the stricken area.

Replacement transformers, 6,000 lb of them, were rushed by plane to the Newark, N.J. airport where trucks waited to deliver them to the most critical areas.

NPA Regulations

Reg. 1—Inventory control.

Reg. 2, Amended—contains basic rules of the Priority System.

Del. 1—authorizes the Department of Defense to issue ratings as outlined in Reg. 2.

Del. 2—authorizes the Atomic Energy Commission to issue ratings as outlined in Reg. 2.

M-1, Amended—outlines rules for placing and scheduling orders for steel.

Supp. to M-1—refers to the use of steel in the construction and repair of railroad freight cars.

M-2—refers to restricted uses of rubber.

M-3—refers to restricted uses of Columbium Bearing Steel.

M-4—refers to restrictions on construction and remodeling of specified types of buildings.

M-5—refers to the use of aluminum.

Executive Order 10160—refers to necessity of preserving records covering transactions during the period May 24 to June 24, 1950.

News Round-Up

M-6—To insure stocks of steel products in steel warehouses.

M-7—Reduces amount of aluminum available for civilian purposes.

M-8—Rules for reporting on inventories, receipts, consumption, import, and distribution of tin.

M-4, Amended—Changes policy of NPA in regard to future extension of construction ban.

M-4, Amended—Clarifies and extends ban on construction for amusement or entertainment purposes.

Supp. to M-1—Program to provide steel for Great Lakes cargo vessels.

M-9—Rules for accepting and scheduling rated defense orders for zinc.

M-10 (Nov. 29, 1950)—Limits cobalt inventories, beginning November 30, to a 20-day supply and directs the sole importer of cobalt how to distribute the supply.

M-11 (Nov. 29, 1950)—To make possible maximum production of copper and copper-base alloy by providing uniform distribution of rated orders among all producers, fabricators, jobbers and warehousemen.

M-12 (Nov. 29, 1950)—To assure copper supplies for the expanding rearmament program. Limits non-defense production and use of brass mill and copper wire mill products by total weight to 85 per cent in January, 85 per cent in February, and 80 per cent in March, 1951 of the average quarterly production and use during the first six months of 1950.

M-1 and M-6, Amended (Dec. 2, 1950)—Revises lead time provisions covering handling of defense orders by steel producers and steel warehouses. Provides that non-integrated steel mills are to get an equitable share of steel from integrated mills after rated orders and NPA directives are filled. Non-integrated steel mills furnish a considerable tonnage to steel warehouses on which many small business firms depend for their steel supply.

M-7, Amended (Dec. 2, 1950)—Allows January usage of aluminum at 80 per cent of base period (1st six months of 1950) and February use at 75 per cent. March is unchanged at 65 per cent.

M-14 (Dec. 2, 1950)—To assure supplies of primary nickel for our expanding rearmament program, and also to provide for equitable distribution of the remaining quantities for non-defense uses.

M-14 (Dec. 2, 1950)—Beginning January 1st 1951, permits the non-defense production and use of zinc products at an average quarterly rate of 80 per cent of the production and use during the first six months of 1950. Use of zinc or zinc products for maintenance and repair work under the order will be limited during each six months period to the average amount used for this purpose during the base period.

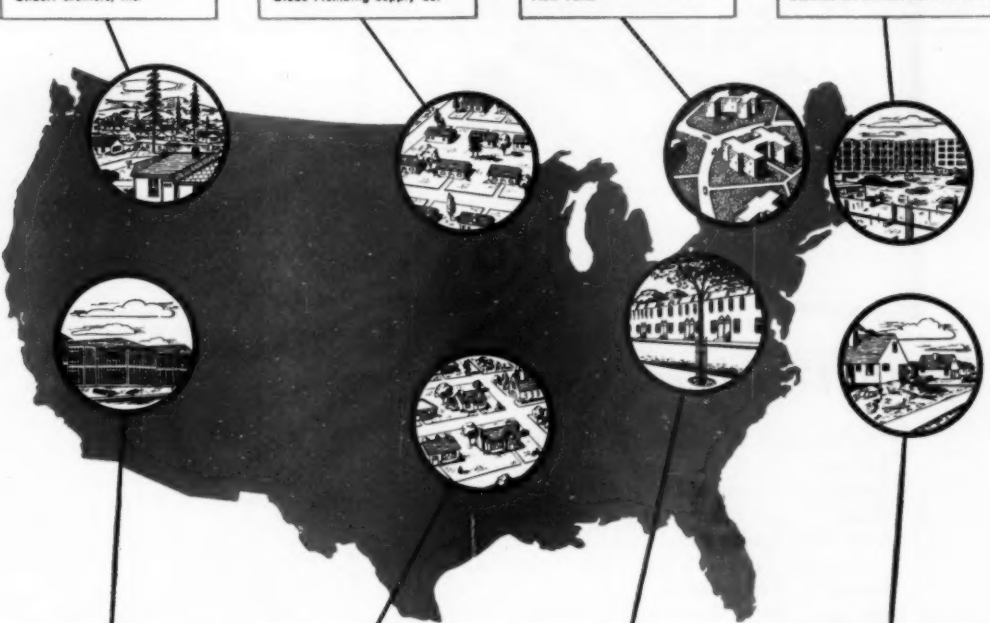
TYPICAL RICHMOND INSTALLATIONS ACROSS THE COUNTRY...

448 Marlene Village homes in Milwaukee, Oregon. Builder and architect: Harry Mittleman Contractor, Inc. Plumbing and Heating Contractor: Rowland Plumbing & Heating Co. Distributor: Gilbert Brothers, Inc.

100 new Woodlawn Park homes in Minneapolis, Minnesota. Builder: Wilkorp, Inc. Plumbing Contractor: Tolaks Plumbing. Heating Contractor: Walter Heating Company. Distributor: Globe Plumbing Supply Co.

1170 Apartments in Fort Lee, New Jersey. Builders: Sarnier & Salow. Architect: Max M. Simon. Distributor: Davis & Warshaw, Inc. Plumbing Contractor: Paramount Plumbing & Heating Co., New York.

648 Veterans Housing Units in Boston, Massachusetts... Building Contractor: C. J. Maney, Inc. Plumbing Contractor: Crane Plumbing & Heating Co. Architect: Saul E. Maffie. Distributor: Samuel Hurwitz Co.



121 Units Multiple Dwellings in Los Angeles, California. Building Contractor: N. J. Nielsen Co. Plumbing Contractor: Charles C. Lockard, Inc. Distributor: Tri-State Pipe and Supply Co.

100 Apt. Units in Memphis, Tenn. Bldg. Contractor: Owner-Builder Corp. Plumbing Contractor: R. E. Shook Service. Architect: Faires & Sanford; Chas. Williams, Asso.: Dist.: Gordon Hollingsworth Co.

234 Homes in Phila., Pa. Builder: Broad Construction Co. Plumbing Contractor: Provident Plumbing and Heating Co. Heating Contractor: William G. English. Distributor: Atlantic P. & H. Supply Co.

940 Post Acres Homes in Westbury, Long Island. Building Contractor: Post Acres Corporation. Plumbing Contractor: Central Plumbing and Heating Co. Distributor: Elite Sales Corporation.

When Quality and Economy Count...Count on Richmond

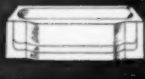
As everyone knows, today's building requirements are more exacting than ever. Plumbing and heating equipment must look attractive...provide quality at reasonable price...with low-cost maintenance and operation to fit your rigid budget. That's why more builders, more

architects, more plumbing contractors nationwide recommend Richmond. In plumbing fixtures of enameled cast iron or vitreous china...in gas or oil-fired automatic heating equipment...always remember—when quality and economy count...count on Richmond.



RICHMOND

RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METAL CO.



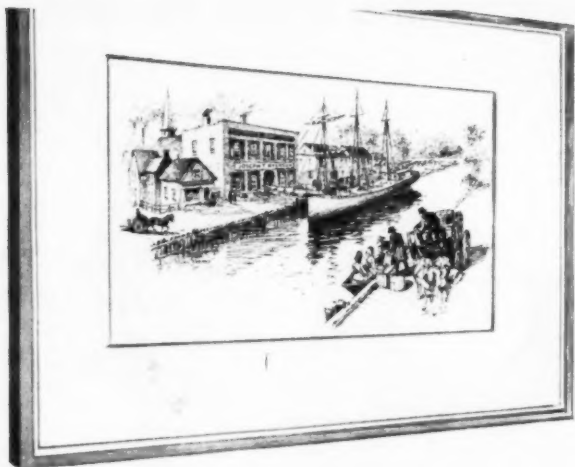
Richmond Radiator Company AA-1
19 East 47th Street, New York 17, N. Y.

Please send me information and literature on Richmond heating equipment and plumbing fixtures.

NAME

COMPANY

ADDRESS



"So that's where Ryerson began!"

"An iron store for blacksmiths, boilermakers and builders." That was the business started by Joseph T. Ryerson of Philadelphia on the banks of the Chicago River in 1842. Essentially, that is the same business that bears his name today.

Of course, there have been tremendous changes. Instead of a single iron store, there are now thirteen great Ryerson steel-service plants, strategically located from coast-to-coast. The blacksmiths, boilermakers and builders have grown enormously in number, many of them now known by other names; automakers, construction engineers, builders of locomotives and aircraft—the list is virtually endless.

Basically, however, your nearby Ryerson Plant is still a store—a department store where you can shop conveniently for all kinds of steel products and order them cut or otherwise prepared to your exact specification. And, though shortages are inevitable today, we haven't stopped planning and building for better service in the future.

From coast to coast we have recently added new equipment and built new plants. Further additions and improvements are underway or on the drawing boards. So we are confident that, in the not too distant future, we will be able to meet your demands completely. Meanwhile, continue to call us—we'll help you to the limit of our ability.



PRINCIPAL PRODUCTS

CARBON STEEL BARS—Hot rolled and cold finished

STRUCTURALS—Channels, angles, beams, etc.

PLATES—Many types including Inland 4-Way Safety Plate

SHEETS—Hot and cold rolled, many types and coatings

TUBING—Seamless and welded, mechanical and boiler tubes

ALLOYS—Hot rolled, cold finished, heat treated

STAINLESS—Allegany bars, plates, sheets, tubes, etc.

REINFORCING—Bars and accessories, spirals, wire mesh

BABBITT—Glyco bearing metal, also Ryertex plastic bearings

MACHINERY & TOOLS—For metal fabrication

JOSEPH T. RYERSON & SON, INC. PLANTS: NEW YORK, BOSTON, PHILADELPHIA, DETROIT, CINCINNATI, CLEVELAND, PITTSBURGH, BUFFALO, CHICAGO, MILWAUKEE, ST. LOUIS, LOS ANGELES, SAN FRANCISCO

RYERSON STEEL



AMERICAN ARTISAN

A Year of Records

ONE of the most eventful years in American history has brought many production records to our industrial machine. It has also brought us a limited war and the threat of World War III.

Our own industry has passed through an interesting cycle. Due to the tremendous demands imposed by record residential construction, plus the replacement demand generated by a high level of prosperity, warm air furnace production and installation has maintained a fast pace all year.

At one point during the year there were indications that the supply of galvanized steel sheets would be ample for the requirements of the heating and sheet metal industry. It was at this time that many people in the industry were predicting the return of a buyer's market for the *Indoor Comfort* dealer. Then came Korea and all previous predictions were knocked galley west.

Mobilization has now taken over the important role in our economy. Peacetime ways of doing business seem destined to vanish soon. A review of some of the production records set in the last year may give a basis for analyzing the probable trend in the coming year.

Construction

More non-farm dwelling units were started in the year 1950 than in any year in history. At the end of the month of November there had been 1,295,000 houses started. Even without the total for December this was a new housing record. The previous all-time high had been the year 1949 which saw 1,025,100 houses started. While it is true that many houses built in this country do not require central heating units, the fact remains that out of this total there were many that did require furnaces. This had a considerable influence on furnace production during the year.

Warm Air Furnaces

Shipments of warm air furnaces during 1950 were consistently high. In fact, the month of August was marked by the shipment of a total of 146,635 furnaces. This was the highest monthly total in history. With steel now being allocated for defense purposes, it is likely that the August record will stand for some time.

To make a new record for yearly shipments only slightly more than 75,000 furnaces had to be shipped in the last quarter of the year.

Steel

With the tremendous impetus provided by the Korean episode and defense preparations, 1950 was the record year for steel production.

At the end of December production was estimated at 97,000,000 tons. This was almost 10 per cent higher than total production for 1944, the peak wartime year. One amazing fact about steel production during 1950 was that furnaces operated at 100 per cent of capacity or more for more than half of the year.

Aluminum

In the year that immediately followed World War II, aluminum sheets became a popular material for the warm air heating contractor. Since he was unable to get all the galvanized steel sheets that he could use, aluminum provided a handy substitute. As the steel shortage was relieved, the demand for aluminum for our industry decreased. Aluminum production went into an overall decline as airplane production diminished too. This decline reached its low point in the middle of 1949. Production began a steady climb that was accelerated by the Korean crisis.

Production of primary aluminum for the year 1950 is estimated at 1,435,000,000 lb. This is almost 20 per cent higher than the 1949 output of 1,207,000,000 lb. In fact, the 1950 total will be exceeded only by 1943 and 1944, the peak wartime years.

Aluminum has already been placed on allocation for civilian users. By March only 65 per cent of the amount used in a 1949 base period will be allowed for civilian use, and this amount will probably decrease.

Gas

Natural gas expanded its facilities and its markets in 1950. Transmission and distribution systems of the gas industry now measure 375,000 miles, a record for any of the nation's transportation systems. An initial entry was made into the New England heating market by

1950 WARM AIR FURNACE SHIPMENTS

Month	Total Units	Air Circulation in per cent		Type of Fuel in per cent			Auto-matic Heat
		F W A	Gravity	Solid	Oil	Gas	%
January	39,887	71	29	15	34	51	85
February	45,618	70	30	15	31	54	85
March	59,982	74	26	9	31	60	91
April	58,798	73	27	8	26	66	92
May	78,349	73	27	9	27	64	91
June	98,517	75	25	9	31	60	91
July	102,304	77	23	13	34	53	87
August	146,635	74	26	16	31	53	84
September	139,014	76	24	14	32	54	86
Total (9 months)	767,866	73	27	13	31	56	88

natural gas and the amount of gas available in this area will be expanded during the coming year. The only area which is not served by natural gas is the Pacific Northwest and plans are under way to bring gas into that territory.

At the beginning of 1950 proved reserves of natural gas totaled 180.3 trillion cu ft, an increase of 6.5 trillion cu ft over proved reserves at the beginning of 1949. Natural gas production during 1950 was estimated at 5.9 trillion cu ft, so new discoveries and extensions of estimates of known fields continue to exceed yearly production.

Forecast

The easiest thing to do under present conditions is to forecast industrial and economic trends for 1951. Any one can be an expert right now. This is so because no one can reliably predict world events in the coming 12 months.

We can examine the factors that have a bearing on our industry and present what we know about them at this time.

In the field of construction, the regulations that have been issued by the National Production Authority were said to be aimed at allowing the completion of approximately 800,000 to 850,000 houses during the coming year. There have been objections from the building industry that credit regulations and material shortages will not permit the building of this many homes. It is possible that there may be some adjustment of the regulations if the desired goal is firmly kept and it seems necessary to loosen restrictions to meet the goal. As the defense situation changes, the housing total for 1951 may remain at the level set, or it may increase or decrease.

If the construction industry is able to get the materials it needs and permission to use them to reach the 800,000 goal, there will be a firm demand for warm air furnaces.

The National Warm Air Heating and Air Conditioning Association has said that if there are 800,000 houses built in 1951, there will be 800,000 warm air furnaces required in the year. New homes will take 300,000 of these furnaces. The other 500,000 units would be needed for replacement in the 10 million homes in America which now have warm air furnaces.

The interrelation of the various segments of our economy is clearly indicated by these forecasts of construction and furnace production. The demand might be firm for 800,000 warm air furnaces in 1951, but if the steel industry is unable to furnish to our industry the steel required to build furnaces, that demand will go unsatisfied.

The NPA is rapidly setting up allocation programs for the steel industry to follow. The warm air heating industry must receive consideration from this agency if construction is to proceed at the designated pace. There is little point in building homes in the colder areas of our nation, if no heating systems are available for installation.

Expansion of capacity has been under way for some time on the part of the steel industry. By July 1, 1950, annual steel capacity had reached 100,500,000 tons of ingots. New facilities will make it possible to produce 110,000,000 tons of ingots by the end of 1951. Even greater expansion of production facilities is in the planning stage.

The outlook for 1951 can be summarized briefly. Demand for warm air heating equipment should continue at a high level. If all out war comes and housing and furnace production are further restricted, the contractors in our industry will probably be able to make the transition to war work without great dislocations. If another world war comes it will be on such a vast scale that all the experience and skill of every member of the warm air heating and sheet metal industry will be needed in the production effort that will be required for victory.

Review And Preview

ARTHUR ROBERTS

At the end of the calendar year it is very important for the businessman to review his operations to see whether there were any weak spots. Several important points are listed which are vital to any analysis of the operation of a business.

WHEN the year is over and the books are audited in the New Year to determine net profit and tax, the average *Indoor Comfort* dealer feels that his work for the prior year is over and he looks forward to the next year's operations. Foresight is essential to successful achievement, but foresight without hindsight to guide it, seldom achieves success. One must look backward to look forward with wisdom.

Few businessmen, however, review the past to help them look ahead. Common practice is to focus attention on net profit shown on the annual income statement, compare it with the net of prior years and judge their success on this basis. This cursory attention paid to the prior year's operating results begets inefficient management. Figures on the annual operating statement are indicators of important business facts that the dealer needs to guide him toward profits the next year. He should review his annual statement thoroughly, and if necessary, dig into the entries in his books to get data needed to guide him in the management of his business during a subsequent period.

Principal Points

These are the main things to consider when reviewing business activities for the prior 12 months.

1. Did net profit increase or decrease during the past year and why? Too many dealers accept an increase or decrease in annual profits without knowing why. This is definitely bad business management. You should know why you get the results you get, otherwise, you're doing business in the blind, taking pot-luck. No businessman can be assured a profit, but he can bolster his chances for success by reviewing operations at the end of a period so that he knows why there was a profit or loss.

There are so many different reasons why a dealer will find an increase or decrease in profits on his operating statement that we shall not try to detail

them or cover the subject thoroughly here. The reader will have to mull over his own figures to find the reason for any variations. Often such investigation will disclose weaknesses that can be corrected in subsequent periods. It may reveal certain effective methods that have increased sales or profit. In the hectic activity of a busy year, the effectiveness of a certain advertising campaign, inferior job work because of bad workmanship, or low-grade materials, and other important factors may be forgotten. Yet, they may have been the prime reasons why profits were higher or lower on a current year's business.

2. Have job costs gone up or down? To answer this question a dealer needs costing forms for job work, which, as many dealers do not seem to realize, differ from financial records showing income and outgo. With materials rising in price, the dealer must tighten cost control with better job supervision and accurate job costing. Modern equipment is one of the best cost-controllers. It minimizes labor cost, materials cost and overhead expense. What is the condition of operating equipment? Check it carefully and replace or overhaul any mechanized units that keep costs high. There are so many ways for loss-leaks to develop that we cannot detail them here. We can merely point out that if a dealer finds his costs are increasing in percentage to sales that he had better take steps to effect more efficient cost control.
3. What is the return on capital investment? Is it higher or lower than the prior year? In the final analysis, this is the best yardstick of managerial efficiency. Many contractors think only of the profit on sales, but this figure is not conclusive. The return on net worth is a more vital factor. There are many reasons why this return may be too low. There may be too much money invested in the business for the volume of sales. The equipment may be in poor shape, help may be inefficient, or customer turnover too high. The business

may be charging off too little depreciation and net worth may be inaccurate. Only a complete renovation of business practices and figures will disclose the reason for a low return on net worth or invested capital.

4. How were collections the past year? Did bad debts increase? Take the total of accounts receivable and strike a percentage on sales. Is it higher or lower than previous years? If higher, review the collection system and practices. Maybe they need improvement. The same error can be made on collections as on inventory. It is possible to freeze too much money in a fixed total that remains the same from month to month, or increases so that this asset is never liquidated. As fast as collections are made, other accounts of similar value take their place. Try to keep receivables down to minimum. They will tend to increase in a war economy as money gets more abundant. If bad debts have increased in proportion to credit sales, then stiffen credit investigations and credit-granting policies.

Analyze Sales

5. Are sales analyzed to determine the profit per department, for service and repairs, over-counter sales and new installations? In 1949, one dealer consulted us about the poor showing his business had made. He had come to the conclusion that one of his employees was stealing money or stock. He asked us to make a detailed audit of cash and stock on hand. We found nothing wrong. But in going over his books, we noticed that he was losing money on service and repairs, of which he did a big volume. We made a thorough check to find that he was selling his repair work at a big loss, just about enough to account for the variance shown on his statement. Breaking down total volume to the various lines handled or departments is called departmentization. Comparatively few dealers in this field departmentize, thus the composite sales figure obscures the loss on a specific line or in a department. The dealer is stymied in his attempt to trace his profit or loss to source.
6. Is the margin on sales up to standard? If this margin drops, the business is in a bad way. This figure should remain high enough to cover overhead expense and net profit. Considering the limited net earned in this field, the margin does not have to slip far to result in a loss. However, you are at a disadvantage here unless you use departmental recordings because margins differ with the lines or departments involved in the sales. This is usually the reason the margin percentage as shown on the composite profit and loss statement will show a decrease even though sales volume remains the same or increases. This has mystified many dealers. The explanation is simple. One year a dealer may sell a high percentage of high-margin items. In that year the composite margin for the high-margin and low-margin items may average high. The next year, he may sell a high percentage of low-margin items and the reverse may be true even though

sales volume has increased. Watch this margin. Keep it up to standard, or, in other words, the spread required for the anticipated net profit.

7. Are there ample auxiliary records to get the business facts needed to conduct operations with maximum efficiency. Financial accounts showing income and outgo are needed to provide the monetary totals that enable you to pay bills promptly, to give accurate totals on sales, expenses, assets and liabilities—but—that is all they can do. If you are not making enough money on jobs you install, over-counter sales or service work, you can compute the loss by means of financial accounts, but you can't determine the reason for the loss. This is as important as knowing how much is lost because if the reason can't be found, the loss will continue. Therefore, special costing forms would be needed to tell how much was earned or lost on each installation and service job. Quite obviously, if the profit per job is slim or non-existent, this will explain the low profit or loss shown on the operating statement. When a dealer determines the reason behind his unsatisfactory operating net, he will be in a position to proceed intelligently in the application of necessary correctives.

Do you keep stock control records showing movement of stock from supplier to you and from you to the job or over-counter customer? With material costs going up stock control records are needed more than ever these days to minimize loss on inventory, which runs high where dealers are lax on stock control.

If you operate more than one truck, you should have truck costing records. These will help determine when maintenance per truck is increasing unduly so that you can authorize an overhaul or trade in the old truck for a new one. If our war economy becomes more acute, it may be hard to get new rolling stock. This makes it more important to keep track of maintenance costs.

Depreciation

Some contractors in this industry who use considerable mechanized equipment charge off depreciation on a composite basis, a flat rate on the total cost of the equipment. They should keep depreciation schedules with a separate record for each unit or group of similar units. Otherwise, they may charge off too little or too much depreciation. In both instances, they will lose money, either by short-costing their sales or by being penalized by the Treasury for paying too low a tax. The depreciation schedule assures reasonable accuracy on the depreciation charge-offs and provides experience figures upon which to base charge-offs in the future. Depreciation, at its best, is an estimate. That is why it gives the taxpayer and Treasury so much trouble. The reader can minimize discrepancies and losses in this internal expense with depreciation schedules that list the cost of the unit,

(Please turn to page 262)

Liability For Heating Equipment Accidents

ALBERT W. GRAY

Accidents which can befall the heating equipment that an Indoor Comfort dealer installs are obviously unexpected but can cause serious trouble to the dealer. Some court decisions show how this liability is interpreted.

EFFORTS made by courts to set up a pattern for determining responsibility for damages from fires and explosions of heating equipment have highlighted an important feature in establishing this liability.

A recent incident occurred at Shawnee, Kansas, in which the verdict of the jury, in favor of the owner in the lawsuit brought as a consequence of this fire, was said by the contractor to be based in "inference on inference and presumption on presumption."

A gas furnace had not been operating properly and the contractor was notified. After inspection, the owner was told that the line leading to the mixer had become clogged with lint and debris and that the burner had not been getting sufficient oxygen. The serviceman said this dirt and accumulation had been pushed away, the pilot light relighted, and that the furnace was operating properly.

A half hour later fire broke out in the basement around the furnace. Before it was extinguished the house and its furnishings had been severely damaged.

In his defense the contractor contended that these facts did not show that he was responsible for the fire. The house was heated by gas. His employee had done some work on this furnace. Later a fire had oc-

curred, but these facts did not prove that he was in any way liable for a fire that occurred a half hour later.

The disturbance of the lint and debris in the line leading to the mixer, according to the testimony at the trial, had clogged the outlets and prevented gas from passing through the outlet holes. As a consequence it had seeped through the main pipe and furnace walls into the cellar. Ultimately it was ignited by the pilot light.

The appellate court refused to disturb this judgment against the contractor. It stated the origin of the fire could be shown by facts and circumstances from which this inference of the contractor's negligence could be reasonably drawn. It was not necessary that the evidence be so strong that it excluded every other possible cause.

Similar Case

A case involving facts very similar to this Kansas incident had been decided only a month before by the Rhode Island Supreme Court. There the contractor's liability was incurred in the installation and service of an oil burner that was entirely under his control and management. The owner had no knowledge of the cause of the fire beyond that it started in the vicinity of the burner.

Emphasizing this feature of "ex-

clusive control" and the responsibility of the contractor as a consequence, the Rhode Island court asserted that negligence is not presumed from the mere happening of an accident. It is nevertheless established by showing that the instrumentality causing the damage was within the exclusive management and control of the person held negligent. The accident could not have happened in the ordinary course without negligence, subject, of course, to the explanation of that person as to the actual cause of the fire.

This same rule in relation to exclusive control of heating systems had been summarized by a Georgia court. In the absence of any satisfactory explanation that the occurrence was accidental, if something unusual happens in respect to property over which a person has exclusive control whereby another is injured and the natural inference is that this unusual occurrence was due to that first person's act, the occurrence is said to speak for itself that such act was negligence.

By this rule the responsibility for these accidents is in a manner placed by the elimination of those who could not be responsible for the occurrence on whomever exercises the exclusive control of a heater.

A Shreveport, Louisiana resident employed a local contractor to install a heating unit. The unit was installed in the attic. Heated air was distributed throughout the house by a blower and system of ducts. Installation was completed on December 22nd. The following day the furnace was checked by the manager of the contracting company.

The day before Christmas electric service of the city was interrupted by an ice storm. Wires were down and current curtailed. That night on account of the cold the mistress of the house sat all night with a

sick baby before the gas stove in the kitchen. At about 6 a.m. on Christmas morning neighbors pounded on the street door shouting that the attic was in flames.

Contractor's Defense

The contractor, when he was sued for damages, maintained that the unit had been perfectly designed, carefully installed and that there could be no possible defect in the installation. The court, however, said that the contractor was liable unless the fire was otherwise ex-

plained, since he was solely responsible for the operation of the heating unit that had caused the damage.



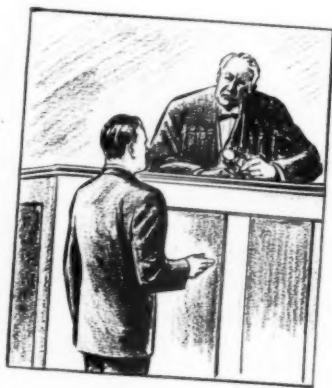
heater from an out of town manufacturer who assured him it could be safely adjusted to propane gas. He then arranged with a local contractor for its installation. No accident occurred for a year and then the pilot light became extinguished. A man sent by the contractor to adjust the heater went into the small basement room in which the heater was installed, lighted a match and the death of the owner of the house, who had accompanied him, was the consequence of the explosion.

The most difficult phase of this problem is that the liability can be incurred on a heating plant which you did not install. Products liability insurance with a broad coverage should protect you from this hazard. Your insurance agent can provide all needed information.

plained, since he was solely responsible for the operation of the heating unit that had caused the damage.

Where a party, explained the court further, knows of a potential danger created by the negligence of another but by his own act brings about an accident, the first offender is relieved of liability. The potential damage in the first instance was merely a circumstance of the accident but was not its immediate cause.

These rules of law holding a contractor liable for heater accidents, fires, explosions and kindred ills, where the contractor has the sole



control of the circumstances, do not apply to fires or explosions where others than the contractor have access to the control of the heating apparatus and it is not under the sole control of the contractor.

The contracting company paid the judgment secured by the owner's estate for the man's death and then sought to recoup in an action against the manufacturer of the heater. This heater, when it had been delivered to the contractor for installation had been tagged, "Warning: This heater must not be used with bottle gas, butane or other liquefied petroleum gases."

Maker's Assurance

The owner however had been assured by the manufacturer that the heater could be readily adjusted for burning propane gas. On this assurance the contractor had made the installation.

On the assumption of this contract by the contractor, said the court denying the contractor's right to recover, any liability of the manufacturer of this heater disappeared. The negligence lay in the failure of

Employee Sues

An employee of the Stanoline Oil and Gas Company in Wyoming sued to recover damages for the explosion of a gas heater operated by that company in a dormitory maintained for its workmen in that state. This employee had shut off the gas when the heater failed to function properly and left the heater door open. Later he attempted to relight the gas and an explosion occurred in which he was injured.

The Wyoming Supreme Court, deciding in favor of the Stanoline company said, when a contractor or other person has the exclusive management and control of a heater that

is the cause of a fire or explosion, the injured person usually does not know the particular circumstances in which the heater is defective. The contractor, having this exclusive management of the heater, can and should know and explain the defects.

But when circumstances do not show that the contractor has this superior knowledge and this exclusive control, or the injured person possesses equal or superior means of explaining the occasion, the negli-

gence of the contractor must be shown.

This same principal of law was laid down some time ago by the Supreme Court of the United States, that, "When a thing that causes injury without the fault of the injured person, is under the exclusive control of another and the injury is such as in the ordinary course of things does not occur if the one having such control uses proper care, it is presumed in the absence of any explana-

tion, that the injury arose from that other person's want of care."

REFERENCES

- Gas Service Company v. Hunt, 183 Fed. 2d 417 (Kansas, Aug. 4, 1950)
Eaton Realty Co. v. Petroleum, 75 A. 2d 178 (Rhode Island, July 28, 1950)
Plunkett v. United Electric Service, 36 So. 2d 704 (La., Jan. 12, 1948)
Rulane v. Montgomery Ward, 56 S.E. 2d 689 (North Carolina, Dec. 14, 1949)
Stanoline Oil & Gas Co. v. Bunce, 62 P. 2d 1297 (Wyo., Dec. 1, 1936)
San Juan Light Co. v. Requena, 224 U.S. 89

Be Sure It's In The Agreement

ERNEST W. FAIR

In any transaction involving the sale, purchase, or merger of a business the contract should contain all clauses necessary to protect both parties. If a concession is made orally it may be difficult to obtain without a written record.

SOME day, sooner or later, almost every heating or sheet metal contractor will have an opportunity to purchase another business, sell his own or arrange a consolidation. The problems that will arise in handling the deal are manifold, but one most important stands out above others . . . be sure it's in the agreement!

Vital Points

Because so little data has been presented on the subject we have checked a number of recent sales transactions, with lawyers and with accountants, and come up with 38 points that should be covered in any such agreement . . . 38 subjects that should be covered by the sale, purchase or merger agreement.

- 1) Definite legal ownership should be established by not only inspecting titles but checking them against county clerk's records.
- 2) The date should be set for taking inventory, books closed on this date and creditors established before making the actual agreement or terms.
- 3) Experience proves it best to make transfers of title

as of the first of the month in order to expedite figuring balance sheets involved.

- 4) The agreement should, in the case of a sale or purchase, include a clause prohibiting the selling party from starting a similar business within the territory for a given length of time, preferably five years.
- 5) Experience has shown that it will always pay to have a lawyer, and if possible an accountant, handle details of any sale, purchase or consolidation.
- 6) The effective date of the agreement should be established before entering into other details, as many other decisions will hinge upon that date itself.
- 7) A definite time should be established as part of the agreement for the closing of the business involved, in order to speed up the necessary accounting.
- 8) The assets included in the stipulated price should be set out in detail and not generalized.
- 9) A check should be made for mortgages and liens against the business or property before entering into any agreement.
- 10) Where an impartial arbitrator is needed in estab-

- lishing values, a supplier salesman covering the territory can generally be depended upon to do the best and most authoritative job.
- 11) Transfer of accounts 30 days past due on the books should be avoided if possible. Generally such accounts are transferred only for collection purposes and the new owner receives a fee for handling.
 - 12) A base method of pricing all inventories should be established at the beginning of negotiations; whether it be cost or market value.
 - 13) A complete analysis of the tax situation should receive close study before an agreement is entered into; this should include all local, state and federal taxes paid by the business.
 - 14) Most losses in these transactions occur in overvaluation of dead-stock inventory, goods almost impossible to realize the value from. The newest trend in handling this situation is a dual inventory base figure, i.e., one for movable merchandise of value and another for that fitting into the dead stock category.
 - 15) When such an agreement cannot be reached arrangements are often made for the purchaser to take only the inventory he deems worthy of purchase.
 - 16) Where accounts receivable are to be collected by the purchaser a definite interval time should be established for remittance by purchaser to seller of such collections.
 - 17) A definition within the agreement should establish what constitutes reasonable effort on the part of the buyer to collect old accounts.
 - 18) A disposition of credit balances in accounts receivable should be established at the agreed time of closing of the business being transferred.
 - 19) Any lease, monthly and weekly rentals, including stores and concessions, prepaid at the closing date of transfer of the agreement, should be apportioned as part of the transfer agreement.
 - 20) All service contracts, licenses and permits of the business should be listed in detail and a determination made of those that are transferable and the agreement should stipulate which transferable items are to be apportioned.
 - 21) A detailed outline of insurance coverage should be prepared by the seller for the purchaser and this coverage checked item by item with the agent handling the insurance for every detail; checked as to its sufficiency to cover the new operation, and status of premiums.
 - 22) Seller should arrange with all utilities for cut off billing to the date of closing.
 - 23) Agreement should cover deposits on utilities, if transferable, and how they are to be paid by the purchaser.
 - 24) Status of the business being purchased with leading suppliers should be checked closely before agreements are entered into.
 - 25) Provision should be established in the agreement for handling of unpaid accounts or contracts.
 - 26) The agreement should provide that the seller should notify all vendors regarding sale of the property and request that cut off statements be rendered both to the seller and to the purchaser.
 - 27) Stipulation should be made covering all salary and wage liabilities, liability for wage claims and retroactive adjustments and transfer of social security or withholding tax funds deducted from employees wages and salaries but not remitted.
 - 28) A complete study of the rental situation or lease on the building, where property purchase is not involved, is recommended. Under certain conditions in some cities rent adjustments granted may be applied retroactively. This should be provided for so as to establish liability thereof.
 - 29) Outline of all zoning regulations covering the operation of the business should be made for study.
 - 30) Agreements with employees as to vacations and pay, sick benefits, insurance, etc., should be outlined by the seller in detail where not covered by union contracts. These should be checked with employees.
 - 31) Check should be made on local or state tax on personal property involved, status, amount and liability for payment prior to effective date of the agreement, should be established as part of the agreement.
 - 32) An adjustment clause should be made covering prepaid or accrued real estate taxes, mortgage interest, etc., if any.
 - 33) Responsibility for violation of any building ordinance past or present, should be established at the time of the agreement, method under which it is to be treated and the cost of remedying the situation fixed if it does occur.
 - 34) Definite disposition of all books and accounting records of the seller pertaining to the business should be established, the purchaser given the right to examine them for a reasonable length of time, and if they are left on the premises for the convenience of the purchaser, the degree of responsibility should be definitely established.
 - 35) An article of the agreement should establish who is to pay for Federal revenue stamps on various documents and agreements, any local or state taxes involved in the transfer, and any fees for experts hired in arranging the transfer.
 - 36) Recording and registration fees, mortgage taxes and fees and any chattel mortgage filing and fees should be provided for as part of the agreement.
 - 37) Agreement should be reached as to future income, franchise or other tax liabilities applicable to periods prior to the date of sale, etc., which may be unknown or contingent at the time of sale.
 - 38) A clause should provide for a method of arbitrating any subsequent differences or misunderstandings which may result from the agreement itself.
- These 38 points will serve as assurance that factors ordinarily causing disputes, misunderstandings and later losses, have been eliminated in any purchase or sale of a business.

SMCNA Compiles Compensation Rates

A Report prepared by the Warm Air Heating Committee, Accident Compensation Sub-committee, showing compensation rates and classifications for most of the states. This report indicates warm air heating contractors may be paying too high a rate because of conditions explained in the report.

FOR many years warm air heating contractors have complained that the rates charged for compensation insurance are too high. In many areas they are paying the same rate as charged for roofing and other classes of work of a more hazardous nature.

In 1949, the Sheet Metal Contractors' National Association appointed a committee to investigate and, if possible, secure the rates charged in all 48 states and see what could be done toward lowering the cost compensation insurance.

This was no small job as every state has different rates, laws, amounts of compensation paid, etc., and some states do not allow private carriers to write compensation insurance, the state itself writing all policies.

The committee, through the assistance of a national insurance agency; Laverack and Haines, the managers of the New York state group insurance; and the National Council on Compensation Insurance finally secured the rates and Code numbers under which warm air heating should be classified. A tabulation follows, showing these rates and classifications. (Page 112)

This tabulation shows rates varying from a low of \$0.70 in the State of Delaware to a high of \$3.27 in New York state.

To understand the variation in rates, it is necessary to look at the benefits paid to the injured workman or his survivors, and to know how the rates are arrived at.

Rate Basis

Rates are based on the amount required to pay claims, plus the cost of administration. Even though benefits paid in some states may be the same, the accident rate may be higher due to varying types of construction and safety requirements, and different wage scales.

As an example of different rates and benefits, let us compare the States of Delaware and New York. New York state with a rate of \$3.27 for Code No. 5550 pays a maximum of \$28.00 for permanent total disability for life, with no limit on the amount. Delaware with a rate of .70 for Code No. 5183 pays \$21.00 maximum and sets a limit to the amount of \$10,500.00. New York state pays the widow for life or until remarriage.

Delaware pays a lesser amount and only for 312 weeks. Delaware pays \$4,200.00 for loss of arm at shoulder. New York pays \$8,736.00 for the same injury.

You will note in the attached tabulation, rates and code numbers as compiled from various sources. In no instance is the rate charged for warm air heating the same as charged for roofing. We would advise any employer who is paying the same for both classifications to contact his insurance carrier, and ask the reason. Of course, if no separation of payroll is made by the employer he pays the highest rate, but that is his own fault.

If the law in your state does not permit separation of payroll; it might be advisable to split up your business under different names so that separate rates can be obtained.

Policies Written Incorrectly

It is the opinion of the committee that most insurance men are as much in the dark, when it comes to proper classifications, as is the contractor; and that many policies have been written under the wrong classification. As an example of this, the national insurance company which supplied rates would write compensation for warm air heating work under Code No. 5183 at a rate of \$3.68 when it should be written under Code No. 5550 at the rate of \$3.27 in New York state.

The New York state association was able to reduce compensation costs considerably by forming a group of selected risks from the membership, and this may or may not be allowed in other states, but would stand investigation, and if possible, with proper management and safety rules could show a substantial savings.

To sum up the matter the following suggestions are made:

1. See that your compensation is written under the proper classification.
2. Look into the possibilities of forming an insurance group with other members of your state association.
3. Maintain accurate payroll records.
4. Separate wages paid into the proper classifications.
5. Strive for better safety (Accidents increase costs.)

CODE CLASSIFICATION NUMBERS AND SOURCE OF INFORMATION

No. 5183 Plumbing — (Warm air heating)

No. 5538 Sheet metal shop and outside

No. 5551 Roofing

No. 3724 Millwright work

No. 5183 Plumbing

No. 5190 Electrical wiring

No. 5538 Sheet metal shop and Outside

No. 3066 Sheet metal shop only

No. 5538 Sheet metal away from shop

No. 5550 Ventilation (Warm air heating)

	From Insurance Company			From National Council on Comp. Ins.				From Laverack & Haines		
	5183	5538	5551	3724	5183	5190	5538	3066	5538	5550
Alabama	.71	1.25	3.14	1.26	.71	1.10	1.25	1.34	1.41	1.41
Arizona	1.69	3.06	6.83							
Arkansas	3.00	3.71	6.97	2.36	1.69	1.72	3.06	1.75	3.33	3.33
California	1.45	3.04	7.54							
Colorado	1.17	1.57	4.41	1.64	1.17	1.09	1.57			
Connecticut	2.18	3.52	9.59	3.03	1.98	1.67	2.75	1.88	3.52	3.52
Delaware	(No. 663)	(No. 676)	(No. 676)							
	.70	1.55	1.55							
Dist. of Columbia	1.74	2.54	7.25	2.77	1.74	1.54	2.54			
Florida	1.25	2.11	3.94	1.88	1.25	1.32	2.11			
Georgia	.94	1.38	3.02	1.70	.94	1.31	1.38			
Idaho	1.54	2.19	7.31							
Illinois	1.40	2.39	5.76	2.26	1.55	1.40	2.65	1.52	2.39	2.39
Indiana	1.06	1.64	4.26	1.82	1.06	1.00	1.64	2.00	1.91	1.91
Iowa	1.18	1.98	6.61	1.50	1.18	1.23	1.81			
Kansas	1.21	1.68	6.00	1.59	1.21	1.16	1.68			
Kentucky	1.22	2.50	5.31	2.00	1.22	1.29	2.50			
Louisiana	2.09	3.91	7.96	4.24	2.09	1.65	3.91			
Maine	1.56	1.56	6.25	1.72	1.56	1.00	1.56	1.34	1.56	1.56
Maryland	1.62	2.07	7.32	2.20	1.47	1.37	1.91			
Massachusetts	1.61	1.86	8.90					2.72	1.86	1.86
Michigan	1.47	1.45	6.51	1.54	1.47	1.21	1.45	1.22	1.45	1.45
Minnesota	1.58	1.64	6.19	2.06	1.58	1.07	1.64	2.08	1.55	1.55
Mississippi	1.94	3.39	8.52							
Missouri	1.35	2.24	7.07	3.63	1.35	1.29	2.24	2.47	2.24	2.24
Montana	1.92	2.74	9.51	3.29	1.92	1.79	2.74			
Nebraska	1.80	2.63	8.22	2.56	1.58	1.43	2.45			
Nevada	2.63	3.75	13.03							
New Hampshire	1.37	1.89	7.10	2.13	1.37	1.26	1.89	2.03	2.08	2.08
New Jersey	1.60	1.90	6.60					2.00	1.90	1.90
New Mexico	1.23	1.60	6.49							
New York			(5545)							
	3.68	4.83	19.45					3.12	4.83	3.27
North Carolina	1.23	1.87	4.50	1.34	1.17	1.20	1.66			
North Dakota	1.53	1.58	5.95							
Ohio	1.22	1.73	4.49							
Oklahoma	2.10	3.67	16.74	3.36	1.96	2.09	3.24			
Oregon	2.91	6.42	15.59							
Pennsylvania	(No. 663)	(No. 676)	(No. 676)							
	.95	2.30	2.30					1.35	2.30	2.30
Rhode Island	2.92	7.43	14.28	5.12	2.92	2.61	7.43	3.23	7.43	7.43
South Carolina	2.18	2.86	8.11	2.64	2.18	2.35	2.86			
South Dakota	1.42	1.74	5.31	1.81	1.42	1.20	1.74			
Tennessee	1.12	2.06	3.90	2.21	1.21	1.30	2.14			
Texas	1.86	2.26	6.42							
Utah	.95	1.94	5.37	2.10	.95	1.45	1.94			
Vermont	1.15	1.33	4.25	1.46	1.07	.89	1.33	1.23	1.33	1.33
Virginia	.82	1.40	4.59	1.10	.82	.97	1.40	1.38	1.75	1.75
Washington	2.24	4.59	14.85							
West Virginia	1.22	2.50	5.31							
Wisconsin	2.14	2.94	8.96							
Wyoming	.84	1.71	4.73							

How Suffering Brings Sales

DAVID MARKSTEIN

Advertising which makes people unhappy that they do not possess the product advertised is the sales booster implied in the title. Many people will enjoy life thoroughly unless you point out to them how important it is that they own what you are selling.

THE more you can make the customer suffer, the more heating equipment you can sell. In fact, some successful advertisers find that their sales go up in almost direct proportion to the suffering their advertisements build up.

The make-'em-suffer formula is a sound one for personal salesmanship as well as for advertising. Many spectacularly result-ful advertising campaigns have been based upon the suffering formula. For example, one company advertises in national magazines: "Is heat all your furnace gives you?" Another advertises: "Thank goodness, I don't have to fix the furnace."

Both of these advertisements play up the suffering of lack. It is likely that the customer did not know before reading the first advertisement that he suffered because his present heat dried out walls and furniture, dehydrated the air, dirtied the curtains and furnishings, cost a good deal to operate, and presented a labor problem — but he was well aware of his suffering after reading the advertisement. A lot of these readers took steps the next day to end their pangs of suffering. Many more put modern *Indoor Comfort* on their want lists for later purchase.

Suffering Begins

Perhaps the firing of the furnace had not constituted such a major problem until the prospects read the latter ad. But numbers of them began to suffer immediately afterward. And the suffering led inevitably to sales.

The way to make customers suffer (and make advertisements pull more sales) is very simple. Advertisers who employ the suffering formula dramatize the situation which faces the prospect who does not have what they sell.

In other words, why does the customer buy *Indoor Comfort*? He does so in order to cut his heating costs, decrease the amount of work involved, and gain several

secondary, but nevertheless important, benefits.

You make him suffer by playing up his lack of these things, and the resultant discomfort. Then offer him an easy solution by ordering from you without delay. The suffering formula is not purely negative advertising; it plays up the positive advantages of an immediate purchase as a solution to the negative problem which is causing the suffering.

The suffering formula works. Statistical studies, as well as numerous case histories, prove this.

Survey

Two years ago, Harold J. Rudolph reported in a book published by Funk and Wagnalls Co. the results of a study of 2,500 *Saturday Evening Post* advertisements. In surveying these advertisements, Mr. Rudolph was interested in only one thing: What made for attention value and readership.

In the matter of illustration (which is always tied in with the theme in a well-planned advertisement), Mr. Rudolph found that, out of many different kinds of illustration material, the result of non-use ranked highest.

Result of use ranked lowest.

Not long ago, the U. S. Envelope Co. ran an advertisement in a women's magazine. Its aim was to sell self-sealing envelopes for home use. To test various appeals, the company arranged with the publication to split run eight different advertisements. In other words, the presses were stopped that many times to change the headline of the envelope ad. Only the appeal was tested. The illustration and copy remained the same.

Which of the eight advertising appeals pulled the greatest number of coupon answers?

The winner was the headline which made a strong effort to build up suffering due to lack of use!

The headline read: "She uses a Dry-sealer because she wants to avoid licking glue." Other headlines men-

tioned sanitation, humidity protection, novelty and ease of the Dry-sealer envelope. But the headline which played up suffering due to lack of use outpulled all of these.

Sometimes, the prospect is made to suffer from a lack of the product itself. These ads play up the purchase of a furnace, warm air system, ventilating system, and air conditioning as such. They rely upon strong brand name plugs to make sure that the prospect will specify the advertised brand and call upon the dealer who ran the advertisement. They are slanted to people who need *Indoor Comfort* and do not have it.

Ads in the Post

You can see these ads in all fields, in any national magazine. Take a single issue of the *Saturday Evening Post* for example. In this biggest of all big magazines, one company asks readers, "Must you air condition?" The suffering and the relief prescription are quickly given: "If you do not, your customers will go to competition. If you do, you will hold old customers and bring in new ones, eliminating traditional summer slump."

Central Mutual Property Insurance points up a suffering point — "Are you paying for someone else's fire protection?"

Armco Steel Corp. tells how "they brought Niagara." The ad's suffering is built around the danger of an inadequate roof.

Mutual of Omaha advises "how to raise your children without broken bones." (In this advertisement, the suffering is physical and can be very real.)

The prospect can be made to suffer from a lack of the competitive selling points which the advertiser offers. In the same issue of the *Post*, Johnson's Wax inquires: "Does your furniture polish give a fade-out shine?"

Easy Washing Machine Corp. headlined its ad: "Every washday more women say, 'It's EASY for me!'"

Mary Proctor advised how to bring relief to another kind of washday suffering: "Ends ironing backache and fatigue."

Kreml hit a particularly sore spot with men: "Hair getting thin? Then groom it with Kreml."

Simoniz asked, "Why waste time with temporary polishes?"

Pennzoil said: "Using too much oil? Switch to Pennzoil."

Some advertisers have gone so far as to invent diseases which are cured by their products. Examples of such diseases include "pink toothbrush," "T-Zone irritation," "halitosis," "B.O.," and a host of others.

The disease method of dramatizing suffering due to lack of *Indoor Comfort* can be used with success in the heating and air conditioning field.

One way to build up the suffering is to claim an exclusive property for the product or the service, which no competitors have. The lack of this can be dramatized as highly acute suffering.

How can the *Indoor Comfort* dealer find such exclusives?

One way is to stage his work. This calls for dramatization of something in the way you do your work that is yours alone.

Exclusive Appeal

For example, if your name happens to be Rand, no competitor can steal your advertising thunder if you promote "Rand-erizing for complete home comfort." The suffering can be tied up with a lack of "Rand-erizing." Example — "No cold corners, no hot fuel bills, when homes are Rand-erized."

You can invent a malady which no competitor's work will cure. Homes which you air condition can be "free from dust-itis," or free from dry-as-dust air. The point of prospect suffering is simple to find here. Example: "Rand *Indoor Comfort* did away with dust-itis in our home."

If one dealer is the first to dramatize clean as well as cool air, it is not very likely that his competitors will care to be forced into a me-too position by telling people that "we also make your air clean."

The suffer-and-sell advertising formula is no panacea for sales. The suffering which the advertising suggests must be real. It must hit at an unfilled need of the prospect.

In other words, suffering which is based upon a lack of something people want is the kind of suffering which makes an advertisement — or sales presentation — sell. But just any claimed suffering won't do. It must be real enough for the prospect to actually feed it.

Basic Needs

What do people want? If the lack of what you sell (or of your own particular, personalized service) can be made to fill one of these basic human needs, the suffering which your ads create will result in solid sales:

They want to make or save money or time; save labor and effort; gain praise; escape physical pain; be clean, comfortable and liked. They want to protect their families from harm — both tangible and intangible; attract and hold the opposite sex; be healthy; gratify curiosity; get more enjoyment out of life. They want to satisfy appetites for food and drink. They want possessions which attract envy. They want to keep up with the Joneses. They want to stay away from trouble. They want to be admired — not criticized. They want to retain their individuality. They want to have and keep good reputations. When buying, they want to be assured of satisfaction.

They suffer when they are threatened with the loss of something they want. They may not be aware of the fact that they want this something until the suffering due to a lack of it is pointed out. But if the lack touches one of the things they want, the suffering will be real and the sales results will be swift.



Arnold Kruckman's Washington Letter

Stockpiling For Defense

JOHAN D. Small, former Naval officer, graduate of Annapolis, and prominent during the final years of World War II in Washington, was appointed Chairman of the Munitions Board. He came from the job of Vice President and Executive Assistant to the President of the Emerson Radio and Phonograph Corp. in New York City. Mr. Small is a tightfisted individual who, despite his harsher qualities, has a good deal of human understanding. He is a well-trained businessman as well as a product of the armed forces and civilian government in the nation's Capital. As head of the Munitions Board, he ought to do a very good job. In fact, he ought to be in line for a much better job than many who will surround Charles E. Wilson, who will be bigger than the President, in what is to come under the national emergency in Washington. There will be times, without question, when Harry Truman will probably wonder just who is running the government. It is a good thing that such men are stepping into the conduct of our affairs.

Mr. Small's appointment is of particular interest to us by reason of the fact that he has taken charge of the considerably maligned and much buffeted Munitions Board. The Munitions Board is a sort of amorphous establishment which the military and the rest of the armed forces regard as a whipping boy. It is

neither military nor is it civilian. In most of its functions, including stockpiling, it is subordinate, in many ways, to the National Security Resources Board, and in others, to the military. When you understand this situation you may realize why Hubert Howard, the coal company head, who held the job under Defense Secretary Louis Johnson, had such a tough time accumulating the much discussed stockpile. Like almost every businessman who comes to Washington to do an honest job for the government, Howard was forced out by Truman eventually, and charged with inefficient management, especially as it related to the stockpiling operation. It is not remarkable that a majority of businessmen usually decline to go into government service. They rarely quit without being smeared. The businessman is not a politician, as a rule, for which reason he is open game to the politicians.

A Critical Problem

The stockpile, presumably, now is on the way to a little more substance and permanence and stability. John Small will probably be able to hold the ship on a true course. It used to be said that the Munitions Board, responsible for the stockpile, was a catchall for the castoffs and second raters in the various bureaus. It certainly will not be that way now. The national stockpile of strategic and critical materials was authorized by a law passed by Congress which

provides that the government shall acquire and retain stocks of materials which are deficient in supply or insufficiently developed for the industrial, military, and naval needs of the country for common defense. The Munitions Board was made the central staff agency for stockpiling, and to formulate stockpile policies and programs. It defines strategic and critical materials as: "Those raw, or semi-processed materials that are required for essential uses in a war emergency, and whose procurement in adequate quantities, quality or time is sufficiently uncertain for any reason to require prior provisions for their supply."

The materials which have hitherto been stockpiled are: agar, aluminum, antimony, asbestos, bauxite, beryl, bismuth, cadmium, castor oil, celestite, chromite, cobalt, coconut oil, columbite, copper, manila fibres for cordage, sisal fibres for cordage, corundum, diamonds, emetine, graphite, hyoscine, iodine, jewel bearings, kyanite, lead, manganese, mercury, mica, monazite, nickel, opium, palm oil, pepper, the platinum group of metals, pyrethrum, quartz crystals, quebracho, quinidine, quinine, rubber, rutile, sapphire, ruby, shellac, sperm oil, talc, tantalite, tin, tungsten, vanadium, zinc zirconium ores, cryolite, diamond dies, fluorspar, magnesium, molybdenum and selenium.

There is naturally a conflict in the interests and operation of the Execu-



Washington Letter

tive branch agencies, many of which have something to do with stockpiling. To smooth out any difficulties, last year there was organized a Munition Board Interdepartmental Stockpile Committee with representatives from the Departments of State, Interior, Agriculture, Commerce, the ECA and the General Services Administration. Observers attend the meetings of this committee representing the NSRB, Bureau of the Budget, Atomic Energy Commission and the Army, Navy and Air Force. In addition, in order that every section of the civilian industry of the country may be familiar with the availability of supplies, specifications, long-term trends, consumption of strategic materials and the relation between procurement and other problems, there is an Industry Advisory Committee, broken into various sections, with a total of 475 members.

Funds Supplied

Thus far Congress has provided \$1,535,000,000 for the purpose of procuring the materials for the stockpile. They started in 1947, very indifferently and gingerly, by reluctantly supplying \$100 million. The next year they gave the Munitions Board, for stockpiling, \$175 million; last year they appropriated \$835 million; this year, thus far, the Congress has supplied \$425 million. The present objective is to purchase a total of stockpile materials valued at \$3,773,000,000. At the end of last year the total value of the materials in the stockpile was 30.4 per cent of that sum. At the same time there was

an additional 11.1 per cent under contract, making 41.5 per cent on hand, or under contract. The Munitions Board optimistically hoped that it would have, either on hand or under contract by the middle of this year, materials with a value of 53.7 per cent. During the past months, the blanket of security has been placed on even this general information. We don't know just exactly what they may or they may not have on hand at the present time. We do know they are definitely short of some very necessary materials. It is often emphasized that we were short of strategic and critical materials when Pearl Harbor was attacked, and they tell us now that we were low when Korea broke on us, with no real blueprint for the future. Informal discussion revealed that gasoline for aircraft was very low before Inchon. The wool supply was low, and Agriculture was all confused and bothered about cotton. It didn't know how much to obtain, or what commitments to make. Our biggest present lacks appear to be copper, zinc, and rubber. The things that we have on hand that seem to be sufficient at this time are antimony, bauxite, celestite, emetine, graphite, hyoscine, iodine, lead, mica, quinine, rutile and sperm oil. It was discovered that there was so much pepper in government-owned stocks that it could be removed from the stockpile. In fact, there was a surplus. Moreover, it was suddenly discovered that it was not a preservative as assumed, and was not an absolute essential in the military sense. So we are not stockpiling any more pepper.

Our synthetic rubber facilities are such that we can produce 940 thousand tons a year. The supplies we have on hand exceed those that we had before World War II. Earlier this year we apparently were headed for an all-time consumption of rubber of 1.2 million tons per annum. In order to bring this under control on account of the needs, chiefly for stockpiling, Secretary Sawyer issued an edict by which he reduced the monthly consumption to 90 thousand tons in order that we might have a sufficient long-trend supply for our needs in transportation, in food production on the farms, and in factories. We have done our utmost to cultivate good political relations with Malaya, Indo-China and Indonesia which are the sources of natural rubber. It does not look as if we are getting very far with our efforts.

Help From Tito

Strange as it may seem, some of our most important stockpiling efforts are being aided by Tito, the Communist head of Yugoslavia. Through Phillips Brothers, New York, he sends us the major part of Yugoslav output of strategic metals, such as lead, copper, antimony, chrome, and other nonferrous metals. During the next year it is anticipated for the stockpile alone he will send us metals valued between \$15 million and \$20 million. It is expected we will get 25 thousand tons of very rare chrome from him. In 1948 he sent us lead, copper, chrome worth \$3,133,000; in 1949 copper and lead valued at

(Please turn to page 250)



RESIDENTIAL AIR CONDITIONING *Section*

*Indoor comfort—in all seasons
for homes and small business*

Coleman

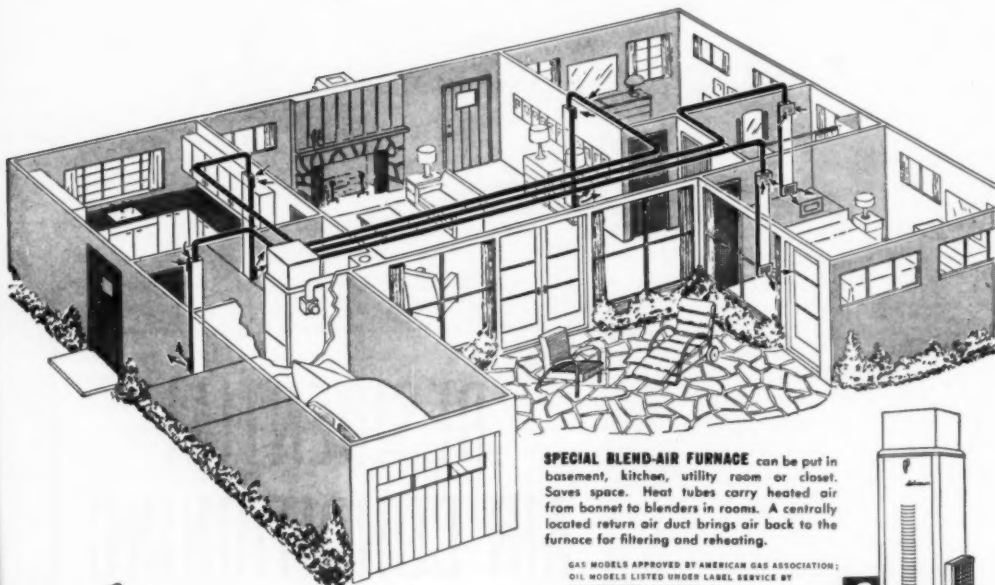
Greatest advance in home heating in years...

Blend-Air

CENTRAL HEATING
AND
VENTILATING

Revolutionary low-cost system of modern forced warm air heating! It's pre-engineered and standardized! Comes complete—ready to install!

There's never been anything like it before—an original new development in central heating that gives more even distribution of heat room to room, and fits any type of construction simply and easily! Saves up to \$100 in installation cost. Here's what makes Blend-Air so unique, low-cost, easy to install!



SPECIAL BLEND-AIR FURNACE can be put in basement, kitchen, utility room or closet. Saves space. Heat tubes carry heated air from bonnet to blenders in rooms. A centrally located return air duct brings air back to the furnace for filtering and reheating.

GAS MODELS APPROVED BY AMERICAN GAS ASSOCIATION;
OIL MODELS LISTED UNDER LABEL SERVICE BY
UNDERWRITERS' LABORATORIES



3 1/2" HEAT TUBES save costly metal work on the job. They're pre-engineered and standardized for precision fit and lower cost. Flexible elbows bend around obstacles and overcome other job conditions. Individual ducts carry heat from furnace to blender in each room. Heat can be dampened down as desired.



MAGIC BLENDERS placed in the wall in each room blend hot air direct from furnace with the room air that is pulled into the blender. This blended warm air is RE-circulated through the room. Temperature can be controlled in each room. There are 3 types of blenders to fit any construction, new houses or old.

Blend-Air is the newest and latest in central home heating. Before you quote another job, find out why Blend-Air is so adaptable, so economical. Send coupon for literature. The Coleman Company, Inc., Wichita 1, Kansas.

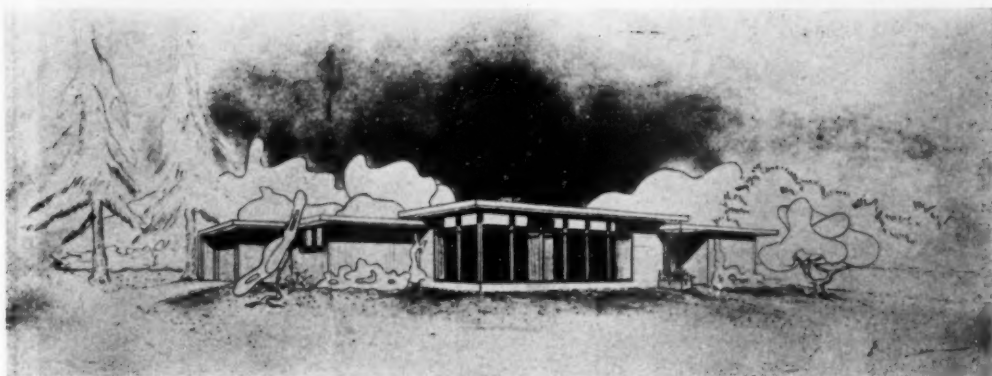
COMFORT COSTS
SO LITTLE
WITH A

Coleman
AMERICA'S LEADER IN HOME HEATING



THE COLEMAN COMPANY, INC., Dept. AA-750 Wichita 1, Kansas
Please send additional information on BLEND-AIR, the revolutionary new cost-saving central heating system for old and new homes.

Name _____
Street _____
City _____ Zone _____ State _____



Artist's sketch of the house

Residential Panel – Convection Heating System

ROBERT S. ASH
Piedmont, Calif.

Here is a description of an outstanding heating system installed in a California house. It successfully solves the problems posed by modern architecture with its huge glass areas.

WHEN we decided to build a new home, large picture windows to take advantage of a canyon and potential marine view and concrete floors on grade to keep construction costs at a minimum were included in our plans.

System Requirements

These two factors, of course, had to be recognized in the design of the heating system for the house. A system to provide comfortable living in this type of dwelling we felt should meet the following requirements, in addition to supplying sufficient heat to keep the temperature at 70 F.

1. Warm floors for playing children.
2. Quick response to California climate.
3. Absence from downdrafts of cold air off the large glass surfaces.

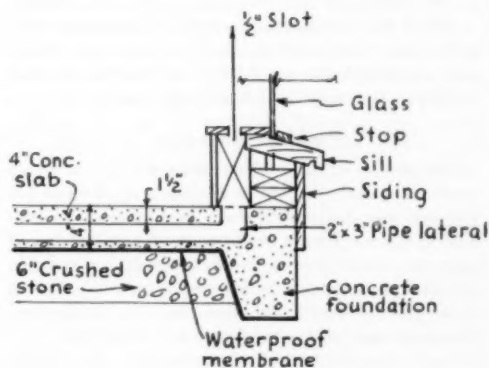


Fig. 1



This corner of the house shows the living room and dining area. A thoroughly modern house, its large glass areas make the design of the correct heating system very important.

4. Air circulation and ventilation, winter and summer.

All of the conventional methods of heating as well as the newer ideas such as panel and perimeter systems were considered, but we did not feel that any of them completely met these four basic requirements.

Problem Answered

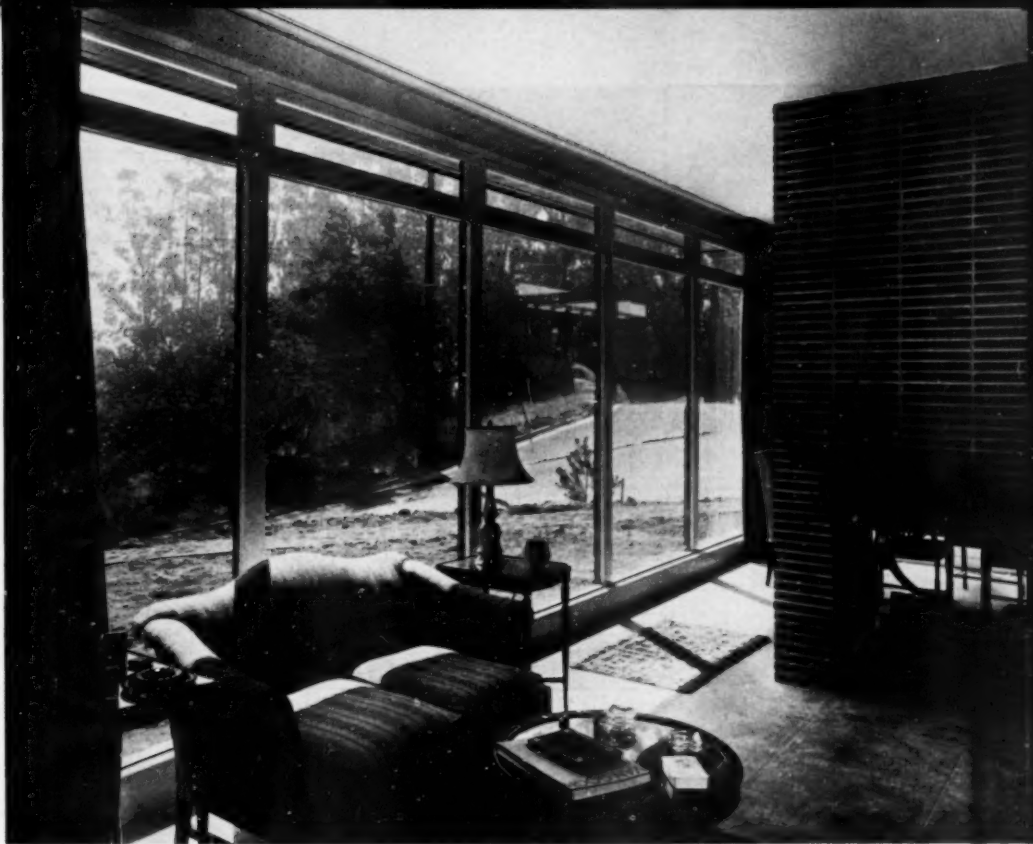
The answer to the problem seemed to be a forced warm air system that would distribute air through the floor and then discharge it along the outside walls where most heat is lost from a building. Such a system should overcome several serious shortcomings in the so-called radiant heating system which has become popular in recent years to heat houses employing slab construction. The weaknesses in this type of system have been:

1. Lack of ventilation and air circulation. This is particularly true in new houses of tight construction and

especially objectionable in the living quarters where people congregate.

2. Thermal inertia. Panel systems respond slowly to a rapidly changing outside temperature because of the lag induced by the large volume of concrete in the floors.
3. Draftiness near outside walls. System cannot counteract the sweep of cold air off large glass areas so prevalent in contemporary architecture.

The foregoing approach to the problem should remedy the objections mentioned and yet retain all of the advantages of panel heat — warm floors, even temperature from floor to ceiling, and inconspicuousness. By introducing air into the rooms, ventilation and air circulation would be provided, lag in response would be prevented, and downdrafts of cold air would be avoided. Thermal lag of the floor slab would be offset by air introduced into the room to modify room temperature rapidly. The discharged air would break up and reverse cold air currents which normally sweep downward from large glass areas. Fig. 2 shows the plan view of the house together with a single line layout of the heating system, as it was finally designed. It was decided that two small forced warm air furnaces would provide a



more flexible arrangement and furnish zone control for the living and sleeping areas. Inasmuch as little time would be spent in the bedrooms during the day hours, requirements 1 and 3 were less important, so a conventional high sidewall register, forced warm air system with trunk duct in the furred down hall ceiling was specified for this space.

Living Area System

The heating system for the living area of the house consists of a forced warm air gas furnace with bottom inlet and top discharge, having an input rating of 70,000 Btu and air delivery of 900 cfm at $\frac{1}{2}$ in. wg. Conventional controls consisting of blower and limit switch and day-night thermostat with cycle anticipation (frequent cycling) were used. The air from the furnace is discharged through a 180 deg elbow to a 24 by 8 in. concrete trunk duct in the floor slab. Galvanized steel conductor pipe laterals branch off from the main duct on 16 in. centers and cross the floor to the outside walls in the living room, dining room, and recreation room. These pipes are 2 by 3 in., 26 gauge in 10 ft lengths. (This size pipe was used so that a 4 in. slab would be satisfactory — 3 in. round conductor pipe would have

Warm air is discharged up across the windows to prevent drafts. The discharge slot can be seen in the window sill, running the length of the windows.

required a 5 to 6 in. slab). The air is discharged into the rooms through a $\frac{1}{2}$ in. continuous slot in the baseboard. See Fig. 1. The use of a slot for discharging the air was thought to give better distribution plus the more important advantages of: 1) breaking up the descending cold air currents from the large glass area; 2) absence from drafts as the air velocity from the slot would soon dissipate itself; 3) relative inconspicuousness; and 4) low cost.

A conventional four way directional high sidewall register is used in the kitchen as all available outside wall space is taken up with built in cabinets and appliances. This is supplemented by heat released from the trunk duct that passes through the breakfast nook area of the kitchen. The system was designed to deliver approximately 20 cfm through each lateral, with an initial trunk duct velocity of 500 fpm and a face velocity

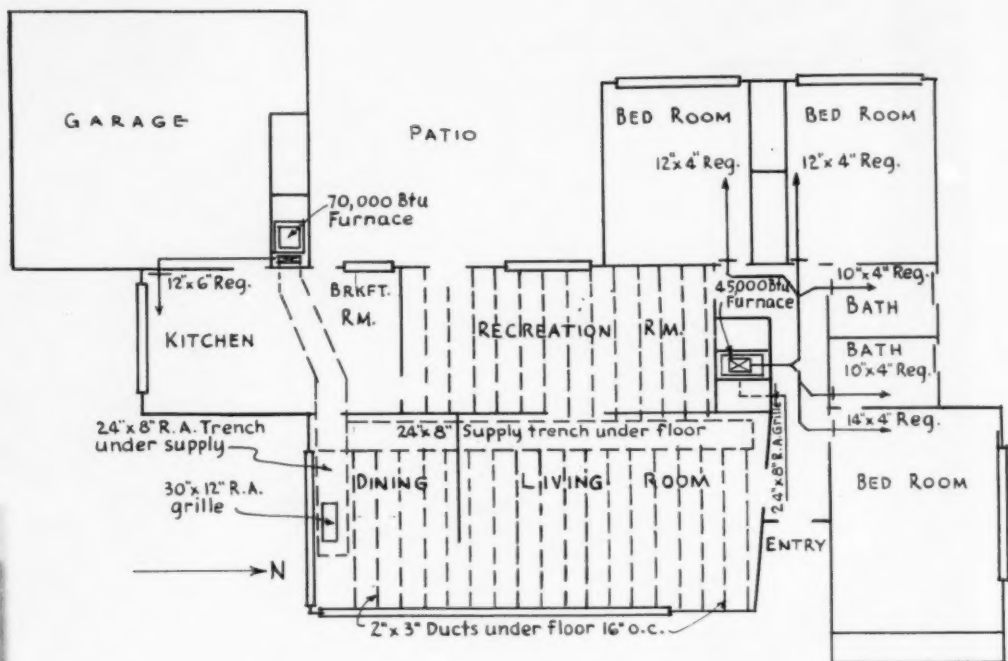
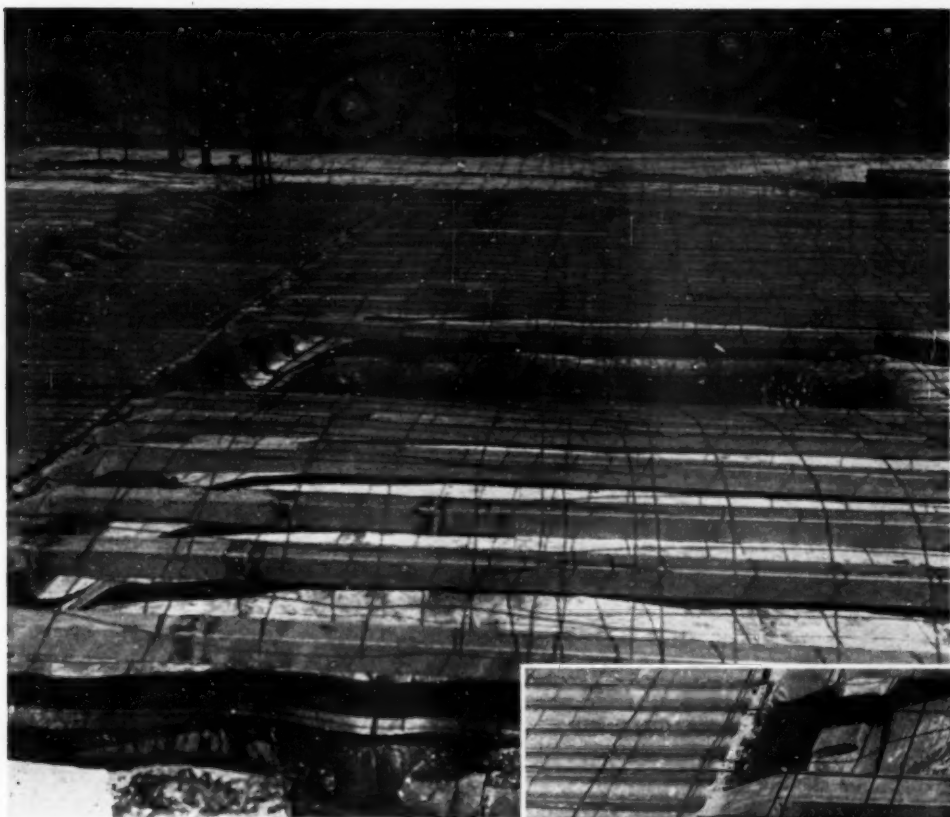


Fig. 2. The floor plan of the house and the heating layout are shown in the drawing above. It is easy to trace the dual system.

At the bottom is the supply trench which runs under the center of the house. The inset gives a closeup of the discharge end of the conductor pipes.





Shown above is a general view of the floor panel just prior to pouring the concrete. The small picture is a closeup of the conductor pipes branching off the supply trench.

of 350 fpm at the slot. No balancing is required as the pressure drop occurs primarily in the laterals, which are of equal length. Initial testing of the system indicated the furthestmost laterals received slightly more air due to static regain in the trunk duct. This, it is hoped, will offset the drop in temperature as the air traverses the trunk duct.

Return Location

More laterals were installed in the recreation room than are required, as future built in furniture considered for this room may block part of the slot. A return air grille is located in the floor of the dining room. Beam ceilings prevented using a high sidewall return which would have been less expensive than the concrete return air duct in the floor. The floor return does have the advantage that it will tend to collect the downdraft of cold air off the south dining room window which is not



blanketed by the slot. Approximately 65 per cent of the air is recirculated. A fresh air roof intake to make up the other 35 per cent is connected and dampered to the return air duct. These percentages may be varied by resetting the dampers. The system is designed to operate on the continuous air circulation principle with the switch set to start the blower at 100 F. At design outside temperature (30 F), the calculated plenum temperature is 130 F.

The heating system for the bedrooms and baths consists of a similar furnace with an input rating of 45,000



Considerable care was exercised when pouring the concrete to make sure there would be no impediments to air flow when the system was put into operation.

Btu. High sidewall registers are located over the doors to make them as unnoticeable as possible. Approximately 65 per cent of the air is recirculated with the other 35 per cent supplied by a fresh air roof intake. Continuous air circulation requires frequent cycling of the heating plant as in the other system. The mild climate in the area makes it economically possible to use considerable fresh air and both heating systems for ventilation in winter and summer.

Fresh Air Utilized

Air is exhausted through two ceiling fans, one located over the kitchen range and the other in the hall. Fresh air supplied to the house is equivalent to $1\frac{1}{2}$ air changes per hour. A slight positive pressure is maintained indoors to prevent infiltration, and dust and dirt which are attendant with natural ventilation. Last summer it was not necessary to open the doors and windows, so no screens were needed. All air passes through the furnace filters, which should reduce cleaning and decorating expenses considerably.

Although it is too early to determine the performance of the heating system, preliminary tests indicate that air

delivery is close to calculations. Photographs with the article show details of the panel-convection system during the course of construction. It should also be pointed out that a system of this type is not dependent on the floor slab for the total heat released. Since floor panels cannot be operated at temperatures much in excess of 85 F if comfort is to be maintained, the heat loss of the building cannot exceed 50 Btu per sq ft of floor area for panel heating systems. By varying the percentage of heat delivered through the floor and the slot by regulation of the blower speed, there is no limiting factor for the panel-convection system. This may be of considerable importance in holding down building costs as double-glazing, insulation, and other means of reducing heat loss need not be employed if economic considerations advise against them.

Cost Was Low

Cost of installation ran approximately 75 cents per sq ft of floor space. The heating contractor was Walnut Creek Sheet Metal and Furnace Co., Walnut Creek, Calif.

Heating And Air Conditioning Engineering Offered By Milwaukee Technical School

More and more schools are making it possible to acquire a good engineering background in heating and air conditioning. The operation of these schools is of great benefit to the industry as a whole.

RECENT accreditation of the Refrigeration, Heating and Air Conditioning Technician curriculum at the Milwaukee School of Engineering by the Engineers' Council for Professional Development marked another milestone in the list of achievements that have made the Milwaukee school one of the nation's ranking technical institutes.

A Brief History

To realize the significance of this accreditation, it is necessary to know a little more about the background of the Milwaukee school. It was conceived as the dream of a 23-year-old German-born physicist and humanitarian almost a half century ago. The school has grown to such proportions that it can claim a current enrollment of more than 1,500 students and an alumni roll of some 35,000 men over a period of 47 years.

Oscar Werwath, founder of the school, received his education in both mechanical and electrical engineering in German universities. He came to this country in 1903, and only six months later had started the school because in his contacts with industry he had realized that it needed men with proper technical training. Mr. Werwath's school was designed originally to convert young men with interests in electricity into valuable,

trained technicians and engineers for positions in industry.

Milwaukee industry cooperated wholeheartedly with the school's program. Industrial leaders realized that future productivity and stability depended upon education agencies which could recruit men from the ranks of the untrained and prepare them for positions of technical and administrative responsibility.

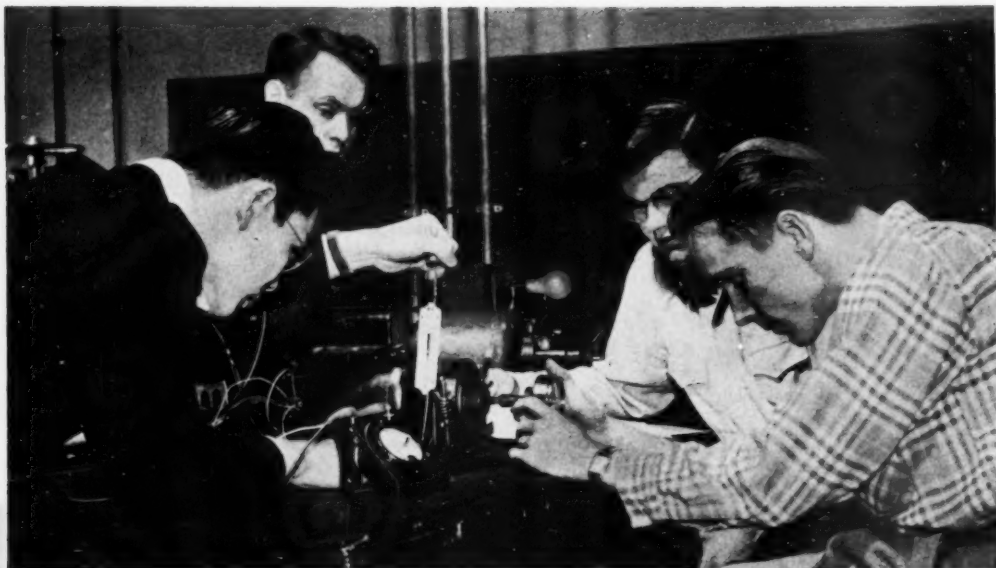
The school, even in its early history, realized the importance of combining theory with practice. The students' shop and laboratory work, with tools, machinery and apparatus, was coordinated with the theoretical background he received from books and lectures.

The Milwaukee School of Engineering grew rapidly after its humble beginning. Its students entered good positions following graduation, and their success led to enrollment at MSOE of students from all 48 states and many parts of the world. Today, more than 23 foreign countries are represented.

As the years passed, it became evident to MSOE educators that a very definite need existed for servicemen and technicians in the heating and refrigeration field. Students who showed an interest were allowed to include several technical specialty subjects with their electrical course. This was the pattern until 1929, and typi-

A lecture on the selection and application of air conditioning diffusers for offices in the Design of Air Conditioning Systems course.





A Prony Brake test is conducted to measure the torque output of a motor in the fractional hp motors lab.



At left, the application of a flow meter is studied in checking the quantity of cool water circulation.

fied the first phase of the gradual development of the school's present refrigeration, heating and air conditioning division.

At that time the need had become so pronounced, that a separate one year curriculum was initiated to provide a student with background in basic heating, refrigeration and electrical subjects. This course proved successful and carried through World War II, con-

stituting the second phase of the development of MSOE's present RHAC course.

Because of the rapid technological developments accelerated by the war, broader coverage became necessary to meet the growing demands of industry and the refrigeration, heating and air conditioning field. The outgrowth of that thinking is the present two-year curriculum which was recently accredited by ECPD. This curriculum is unique in that a student who wishes only a serviceman's background can procure the necessary information in only six months. Upon the satisfactory completion of subjects covered in this phase of instruction, he receives a Refrigeration Serviceman's Certificate.

Additional Study

Should the student also desire background in heating, an additional six months of instruction in this phase will entitle him to a Refrigeration and Heating Serviceman's Certificate. This completes his serviceman's level of instruction in refrigeration and heating.

Concurrently with both technical specialty subjects of refrigeration and heating, the student also receives basic background in electricity, drafting, English, mathematics, and allied shop work such as welding, machine shop and metal fabrication.

With this added training, the student is now ready for the technician's phase of his education, if he decides

to continue in his chosen field and possesses the requisite ability. In the final year he is allowed to design installations, as well as test and operate typical equipment in all phases of refrigeration, heating and air conditioning. With the practical phase of his education, he also receives the requisite theoretical advanced background in all three phases. Thus, his education which was founded upon the serviceman's background in refrigeration, heating and air conditioning, is first enlarged, then finally coordinated in one overall picture of air conditioning.

In addition to technical specialties, the MSOE student also studies industrial commerce, a course that includes mathematics, physics, electricity, English and management problems. Upon completion of this phase of his education he is eligible for his technician's certificate and is now ready for his contact with industry.

Field Trips Helpful

The RHAC division of the School of Engineering, has for many years, arranged field trips for students in highly industrialized Milwaukee which offers an ideal locale for a close inspection of actual refrigeration, heating and air conditioning installations. The students themselves

help to arrange for the field trips. These contacts with industry have proved invaluable to the student in showing him actual industrial application of what he has learned in the classroom.

This contact with industry encompasses the fourth phase of development of the RHAC division at MSOE. From the time of the school's inception, prominent members of industry have been continually consulted for their needs. Currently, the complete RHAC curriculum is again under the surveillance of the school's Industrial Advisory Committee composed of outstanding rep-

(Please turn to page 264)



Operating an ammonia compressor in the advanced refrigeration applications lab. In the laboratory the students test and prove the theories taught in the lecture courses.





Warm Air Units Heat Huge California

Application of direct-fired warm air units to large industrial buildings is a marked trend. Efficiency, economy and comfort are obtained.



This heater is located in the warehouse. Nozzles direct the air four ways.

HERMAN A. PIETSCH*

A THREE-FOLD heating and ventilating problem confronted the engineers who designed and built the largest cold reduction sheet and tin plate mill on the West Coast. The difficulty was solved by the availability of a heater that conformed closely to their specifications. The packaged, direct-fired space heaters chosen for these duties are reported as giving satisfactory, economical service with a minimum of maintenance.

The vast, new sheet and tin plate

**Chief Engineer, Heating Equipment, Dravo Corp.*

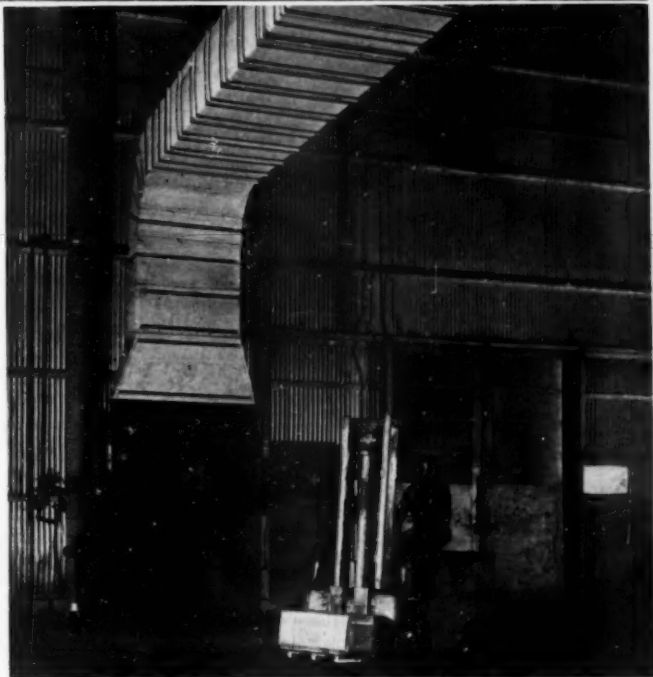
RESIDENTIAL AIR CONDITIONING SECTION
AMERICAN ARTISAN, JANUARY, 1951



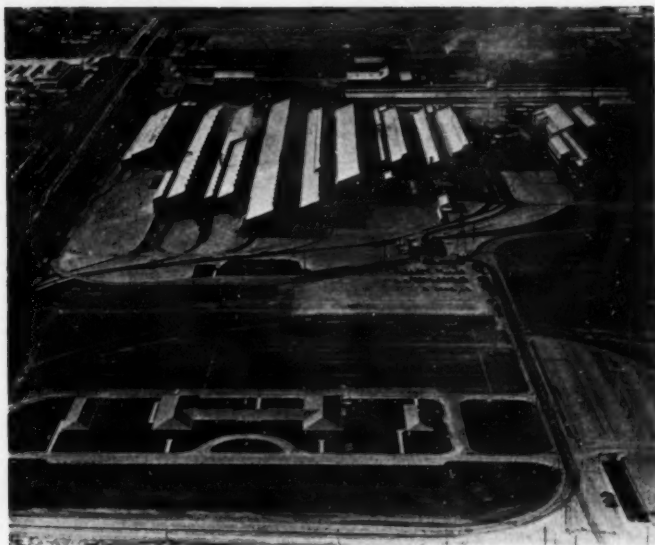
Steel Mill

mill at the Pittsburg, Calif., plant of the Columbia Steel Co., a United States Steel subsidiary, is modern in every respect. It was dedicated on October 21, 1948, in a ceremony attended by the entire board of directors of U. S. Steel, as well as hundreds of representatives of the press, business, and industry. The over-all plant includes basic production open hearths, rolling mills, wire mills, rod mill and wire rope mill. Other facilities include an emergency hospital, a cafeteria, rest rooms for both men and women, a modern chemical-metallurgical-testing laboratory, and complete storage and maintenance accommodations.

The new sheet and tin mill is a part of United States Steel corporation's program of addition and improvement, launched since the end of World War II. Occupying 24½ acres of floor space under one roof, the building is more than 1600 ft long and 974 ft wide. The machinery



At the top is shown the duct outlet system over the hot dip tinning machines. Below is the heater that supplies the air to the ducts shown.



Aerial view of the cold reduction sheet and tin plate mill of Columbia Steel. The building in the foreground contains the administrative offices. The mill building in the background occupies a floor space of about 24 1/2 acres.

contained in this building weighs more than 13,500 tons. The operation of the Pittsburgh sheet and tin mill adds approximately 325,000 net tons annually to the supply of flat-rolled steel products made by West Coast plants for Western industry.

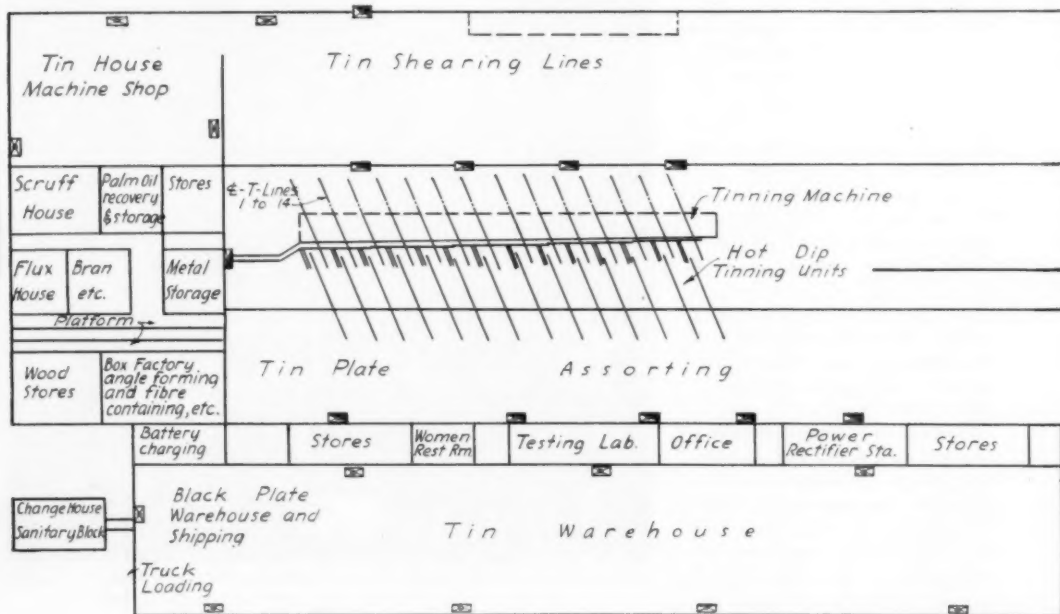
Because Pittsburgh is located in an area subject to seasonal temperature changes at the junction of the Sac-

ramento and San Joaquin Rivers, 47 miles northeast of San Francisco, the mill's heating demand is somewhat greater in winter than the usual California weather conditions require. To this is added a condensation problem, caused by the precipitation of water droplets on cold metal surfaces from atmospheric moisture held in suspension by warmed air within the mill. Another phase of operating conditions requires removal of fumes from hot dip tinning baths. These conditions necessitate a flexible and efficient heating and ventilating system for this modern mill.

Heating and Ventilating Requirements

What comprises the flexible, efficient type of heating and ventilating system for this modern mill? Primarily, it must embody certain features that assure:

1. Proper distribution of heat in the most economical manner in order to minimize roof loss, eliminate drafts and direct the heated air stream where it



will best perform the duties for which it is generated, that is, at the working level;

2. Flexibility of application and compactness so that a maximum area may be properly heated with a minimum amount of floor space occupied by each heater;
3. Maximum efficiency in combustion of fuel, and the greatest possible transfer of useful heat to the air stream;
4. Ability to maintain the temperature of a metal storage area at a constant level, in order to avoid condensation of atmospheric moisture on stored tin plate, etc.;
5. Economical provision of a dry, warm air supply by reheating and recirculating air drawn from floor level, and the ability to temper fresh air drawn from outside to replace stale air removed;
6. A stream of air in motion to provide cooling action in summer as well as positive ventilation in winter and in summer;
7. Automatic operation of each heater permitting shut off when the area served reaches the proper temperature;
8. Simplicity of design and dependability of operation with a minimum of fuel and maintenance expense;
9. Ease of installation, maximum safety in operation, and easy accessibility for servicing and cleaning.

Planning the System

Once these features were recognized as requisites for the entire heating and ventilating system, it was apparent that the system must consist of a number of strategically placed units, due to the vast area served. The heaters were required to heat and ventilate the various sheet and tin plate warehouses, and the areas housing the tin

heaters with output of 1,250,000 Btu per hour each, and 11 with output of 1,000,000 Btu per hour each. The 21 heaters of 1,250,000 Btu capacity were placed in service when the mill was put into operation, and the other 11 were installed in 1949.

All 32 of the heaters are fired by natural gas at a pressure of 5 oz at the burners, reduced from line pressure by regulators. Combustion air is taken from the main supply fans.

Comfort Heating

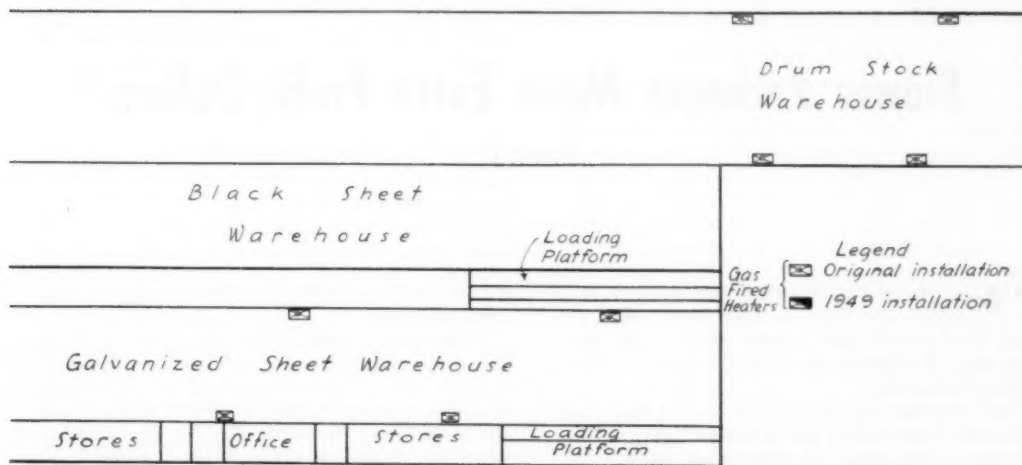
One of the most important functions of any heating and ventilating system is the provision of properly warmed air so that each employee may perform his (or her) various duties in comfort and without lost time.

The heaters draw in cool air at floor level through intake louvers in the lower portion of the casing at the rate of 11,000 cfm per million Btu output, temper it, then circulate it. The air temperature is raised approximately 80 F, then the air is distributed through directional louvered nozzles parallel to the floor, but above the workers' heads, at sufficiently high velocity — 2,000 fpm — to evenly blanket a large area.

This method of heat distribution produces a uniform temperature at the working level without drafts, and tends to prevent the warm air from rising immediately to the roof, thereby reducing the roof heat loss.

Condensate Control

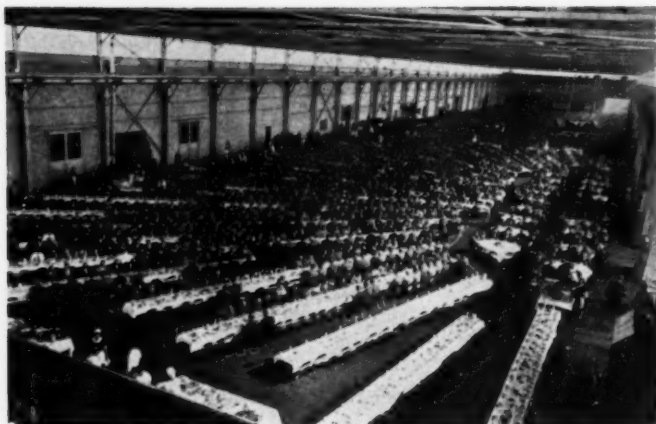
It is commonly known that warm air can carry more moisture in vapor form than can cold air. When warm



house machine shop, the tin shearing lines, the hot dip tinning units, and the tin plate assorting room, covering almost half the mill area.

A total of 32 direct fired heaters were installed in various portions of the sheet and tin plate mill — 21

air meets a cold body, particularly one of metal, the atmospheric moisture so carried is deposited in the form of droplets of condensate on the cold body. In many a steel warehouse, this condensate has caused trouble by forming rust spots on the stored metal, and steps



Dedication of the Columbia mill was attended by the entire board of directors of U. S. Steel. This photo gives a good view of the size of the warehouse that is heated by warm air.

were taken to eliminate the possibility of this happening at the Pittsburgh mill. The engineers knew that this condition could be overcome by holding the temperature of the stored material within certain limits at all times.

To prevent this condensation, nine heaters are installed in the tin plate warehouse, and four each in two sheet warehouses. Certain of the heated air streams are directed downward, to heat the floor as well as the material stacked in the immediate vicinity. By the same operation, any droplets of moisture which may have formed on either the floor or the stock are evaporated and carried off by the warm air stream.

Another example of the extreme care that is taken to avoid condensation of atmospheric moisture is the treatment of box cars which are brought in on the loading track included within the tin plate warehouse. If the

24 hours before any product is packed into them for shipment to the customer.

A heater near the end wall of the tinning room, tempers fresh make-up air drawn from outside, warms it, and blows it through a duct above the employees' heads. The warm air stream is directed downward by the duct outlets so that each employee in the area is assured of a plentiful supply of fresh air. This duct becomes progressively smaller as it extends farther away from the heating unit, providing a constant, equalized air supply from all outlets.

In the summertime, the burners are turned off, and the units are used to circulate fresh air in exactly the same manner in which the heated air is distributed in the winter.

Blower Packages Mean Extra Profit Dollars

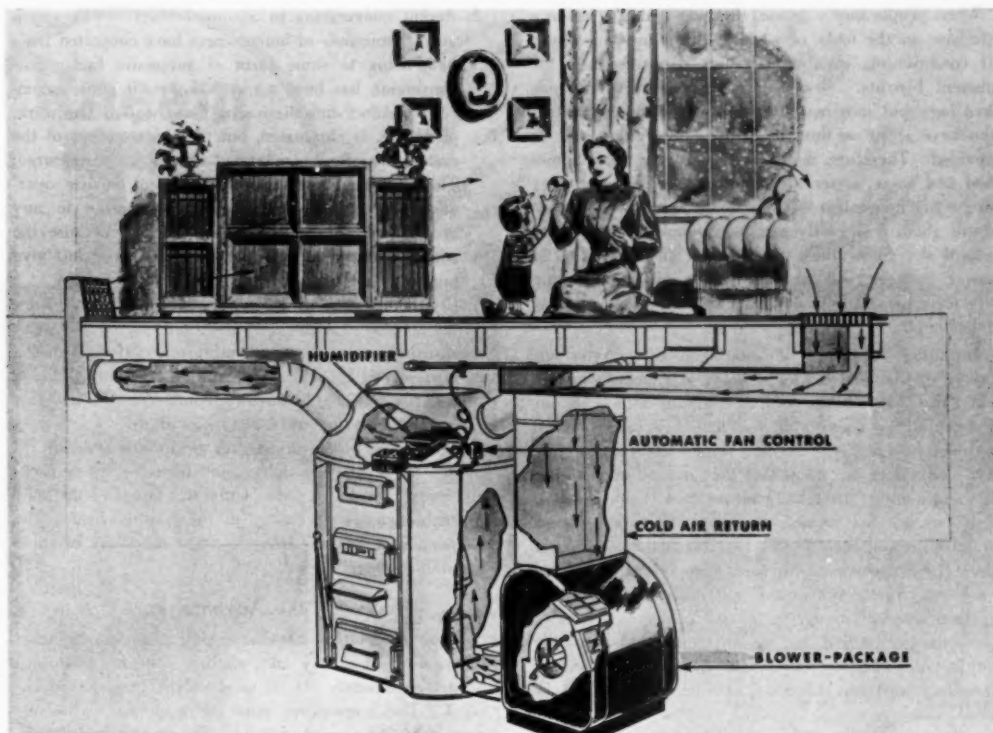
Part I

"WHY should I try to make a furnace blower sale, instead of trying to sell a new unit?" Have you ever asked yourself that question or asked it of someone else? We think we can supply the answer in dollars and cents language.

Let's examine what benefits there are for you in aggressively promoting the sale of furnace blowers. First, it means a new source of business and profits. This business can be almost 100 per cent plus. Practically no increase in inventory is required. Few dealers would find it necessary to expand shop capacity, because few if any are doing maximum business on their present overhead costs. In other words, with practically no change in overhead and inventory, you can identify

yourself with furnace blower packages and reap plus profits at no risk.

Another benefit is seasonal stability. Blower packages can provide this. Right now, with just a month or two of winter left, is a good time to seek blower business. Because installation requires the furnace fire to be out only a few hours, the major objection to winter-time selling is nullified. Homeowners never recognize the shortcomings of their heating system more clearly than they do when it's zero outside. And when are they as conscious of fuel bills as when they're paying them? For these and other reasons, the comfort and economy provided by a blower are potent selling points in mid-winter.



Although blower packages don't provide year round air conditioning, they do serve a useful purpose in the summer. By circulating basement air through the home, the temperature of the house is often lowered several degrees. This advantage is cited to show how a blower package can be a salable item even in mid summer, thereby giving all round seasonable sales.

It Answers a Need

There is something else to be considered besides extra profit and stability. In the blower package you have the answer to the homeowner's needs. You have the means that will enable him to enjoy winter air conditioning from his present system. You have something to sell that he needs, wants, and can afford. Thus, you offer a genuine service. Nothing pays off better in the long run. It means prestige. It assures homeowners of your reliability. In short, it builds your greatest business asset — your name.

Statistics are often dull and dry, but here are some figures which we think will be very interesting to the *Indoor Comfort* dealer.

The sale of furnace blower packages in 1949 was \$6,072,000 as compared to \$3,675,000 in 1948. Sales almost doubled in only a year, and estimates from the Furnace Blower Manufacturers' Association indicate that the 1950 figure will be even higher. These figures will

give you an idea of the growing preference for winter air conditioning and the market that exists for furnace blowers.

Many Gravity Furnaces

Gravity furnaces are still being installed at a remarkable rate. More gravity furnaces are now being installed each year than all warm air types combined in previous years. This means that the number of prospects for blower packages continues to grow.

Yet, you may ask "If winter air conditioning as provided by a unit having a blower is so superior to a gravity warm air system, why are so many gravity systems being installed?" There are reasons, but not because people don't recognize the value of a furnace blower nor because they are 100 per cent satisfied with their present gravity system. Gravity furnace owners are in the market for a blower package — simple because these blower packages can economically convert their unit to winter air conditioning.

Why Are They Prospects?

There are a number of reasons why the level of gravity installations is high and perhaps you recognize these reasons. But, let's take a brief look at them here to illustrate why homeowners are not content with their present system — why they are now prospects for a blower package.

When people buy a house, they can't always make a purchase on the basis of whether the house has winter air conditioning, even though they may recognize the inherent benefits. Gravity furnaces by the thousands have been put into new homes by building contractors who have given no thought to the comfort that will be provided. Therefore, many people who buy these homes need and want winter air conditioning. Because they have a big investment in their homes, and their furnace is still good, it is costly and uneconomical for them to discard it. Show these people how installation of a blower package will provide winter air conditioning with their present unit, and you will have a new source of business.

The lower initial cost of installation of a gravity furnace is another reason why so many of these systems are being installed. Many people building a new home, or even buying a new unit, feel that they cannot afford the relatively higher cost of a winter air conditioning unit. This does not mean that they do not *want* winter air conditioning. It merely means that they've had to forego its benefits because of price. The ideal answer for an objection such as this is a furnace blower package. The homeowner who must keep initial cost down can buy a gravity system and add winter air conditioning later when his budget permits. You may also point out to the prospect, if such an objection arises, that the addition of a furnace blower will give enough economy throughout the year to make up for the difference in initial cost.

We said above that the inability to recognize the value of a furnace blower was not one of the reasons for the installation of so many gravity systems — yet there is a great deal of educating to be done. People know the value of a furnace blower package, but they do not recognize the *relative* benefits as compared to a gravity system. If you are to make a successful blower sale, you must learn the benefits of this system yourself and then forcefully transmit this knowledge to the prospect in terms of what it can do for him.

Types of Prospects

The overwhelming majority of prospects for blower packages, the ones who mean a profitable source of business for you, fall into three main categories:

1. Furnaces less than 10 years old — A furnace that is no more than 10 years old is usually far from worn out. In such cases it is neither economically sound nor ethical to push the sale of a new unit. This situation is typical of homes built in recent years. You can hardly expect someone who bought a home a year or two ago to discard the furnace and install a new unit. However, a blower package attachment to such a furnace will give the same advantages of comfort, health, convenience, and fuel economy that can be obtained with a completely new forced air system. Installation of a blower is the way to help this group get maximum efficiency from their present furnace.

2. Recent conversions to automatic fuel — In recent years, thousands of homeowners have converted from hand-firing to some form of automatic fuel. This conversion has been made in hopes of getting complete comfort and eliminating hard work. The work, of course, is eliminated, but the shortcomings of the system are often exaggerated instead of being cured. Thermostatic control and intermittent burner operation tend to disclose uneven distribution in any system. This type of prospect is ideal because the simple addition of a blower package will at last give him what he has wanted in the present system.
3. Economic status of homeowners — All people want the benefits of winter air conditioning yet many can't afford the cost of a new heating unit. If a prospect's furnace can be saved, then the addition of a blower package will help him realize comfort, health and fuel savings at a cost he readily can afford.

Tremendous opportunities for profit are available to those dealers who are able to sell furnace blower package units. There is no doubt that this is one of the most profitable phases of selling in the heating field. The question now arises, "How do I get my share of these profitable sales?"

Tell the Advantages

There are many factors in making a sale but the most important part of any sale, whether it be for a furnace blower or a safety pin, is to show the prospect advantages. The homeowner must be made to realize his need, then these needs must be accentuated and played upon. Generally, before a prospect is really ready to be sold, he must be aware of what the product can do for him. He isn't interested in technical details, the number of years the firm has been in business, or in what a wonderful factory the Jones Company produces these items. He is interested in seeing what a furnace blower can do for the most important person in the world — *himself!*

At the risk of being obvious in stating selling points that are familiar to every dealer, we will set down those advantages to the homeowner which will be helpful in making a successful sale. Before a sale can progress into any other stage, the prospect must first be made conscious of his need, and in this case, it's his need for a furnace blower.

One of the most important advantages that can be shown to any furnace blower prospect, is that of health. Point out to the prospect that more healthful living conditions will be the reward for the homeowner who installs winter air conditioning in his house, eliminates cold floors and chilly zones, and supplies clean, filtered air to every room in the house. State it something like this: "Mr. Prospect, this blower unit forces warm air into all rooms in your house — even those farthest from the furnace. This forced circulation means an even warmth — no cold, drafty corners or floors which are

(Please turn to page 270)

Rheem

R

*Design for
Comfortable Living*



RHEEM *Gas-Fired*

**WARM AIR FURNACES
THE PREFERRED HEAT**



Rheem R

THERE'S A RHEEM . .



MODEL 3202-77



MODEL 3202-100



MODEL 3202-125



MODEL 3202-150



MODEL 3202-77
Width 18 1/2"
Height 60 1/2"
Depth 26"
BTU Input 77,000
BTU Output 61,600

MODEL 3202-100
Width 18 1/2"
Height 60 1/2"
Depth 26"
BTU Input 100,000
BTU Output 80,000

MODEL 3202-125
Width 25 1/2"
Height 63"
Depth 26"
BTU Input 125,000
BTU Output 100,000

MODEL 3202-150
Width 25 1/2"
Height 63"
Depth 28"
BTU Input 150,000
BTU Output 120,000

ALSO AVAILABLE IN MODEL 3203 WITH FRONT VENT.

MODEL 3402-77



MODEL 3402-100



SERIES 3400

MODEL 3402-77
Width 38 1/2"
Height 47"
Depth 26"
BTU Input 77,000
BTU Output 61,600

MODEL 3402-100
Width 38 1/2"
Height 47"
Depth 26"
BTU Input 100,000
BTU Output 80,000

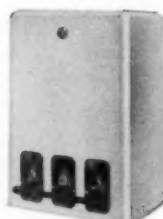
MODEL 3300-75



MODEL 3300-90



MODEL 3300-112



SERIES 3300

MODEL 3300-75
Width 27 1/2"
Height 55 1/2"
Depth 29"
BTU Input 75,000
BTU Output 56,300

MODEL 3300-90
Width 27 1/2"
Height 55 1/2"
Depth 35"
BTU Input 90,000
BTU Output 67,500

MODEL 3300-112
Width 37 1/2"
Height 55 1/2"
Depth 29"
BTU Input 112,000
BTU Output 84,000

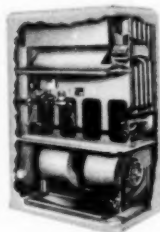
MODEL 3202-66

Width 18 1/2" • Height 60 1/2" • Depth 26"
BTU Input 66,000 • BTU Output 48,200

Winter Air Conditioner **FOR EVERY JOB**

RHEEM SERIES 3200 WINTER AIR CONDITIONERS

MODEL 3200-168



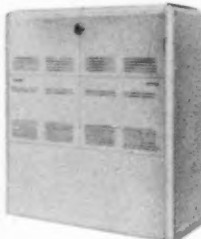
MODEL 3200-168
Width 44 1/2"
Height 64"
Depth 26 1/2"
BTU Input 168,000
BTU Output 134,000

MODEL 3200-200



MODEL 3200-200
Width 46 1/2"
Height 64"
Depth 26 1/2"
BTU Input 200,000
BTU Output 160,000

MODEL 3200-250



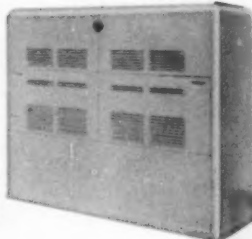
MODEL 3200-250
Width 56 1/2"
Height 64"
Depth 26 1/2"
BTU Input 250,000
BTU Output 200,000

MODEL 3200-300



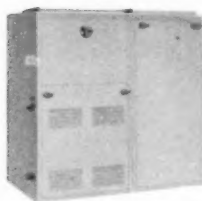
MODEL 3200-300
Width 66 1/2"
Height 64"
Depth 26 1/2"
BTU Input 300,000
BTU Output 240,000

MODEL 3200-350



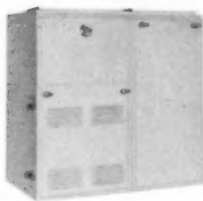
MODEL 3200-350
Width 76 1/2"
Height 64"
Depth 26 1/2"
BTU Input 350,000
BTU Output 280,000

MODEL 3402-125



MODEL 3402-125
Width 48 1/2"
Height 48"
Depth 28"
BTU Input 125,000
BTU Output 100,000

MODEL 3402-150



MODEL 3402-150
Width 48 1/2"
Height 48"
Depth 28"
BTU Input 150,000
BTU Output 130,000

RHEEM SERIES 1700 GAS CONSOLE UNITS

MODEL 1701-25



MODEL 1701-25
Width 26"
Height 29 1/2"
Depth 13"
BTU Input 25,000

MODEL 1701-35



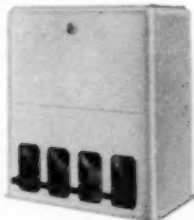
MODEL 1701-35
Width 26"
Height 24"
Depth 13"
BTU Input 35,000

MODEL 1701-50



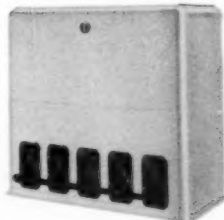
MODEL 1701-50
Width 26"
Height 34"
Depth 20"
BTU Input 50,000

MODEL 3300-150



MODEL 3300-150
Width 47 1/2"
Height 35 1/2"
Depth 21"
BTU Input 150,000
BTU Output 112,500

MODEL 3300-187



MODEL 3300-187
Width 57 1/2"
Height 35 1/2"
Depth 21"
BTU Input 187,000
BTU Output 140,500

RHEEM "ComPACT" FLOOR FURNACES SERIES 1600

MODEL 1603-53CD



MODEL 1603-53CD
Width 22"
Length 23 1/2"
Depth 22 1/2"
BTU Input 50,000
BTU Output 36,000



MODEL 1603-25P
or
MODEL 1603-38P
Width 14 1/2"
Length 23 1/2"
Depth 22 1/2"
BTU Input 25,000
BTU Output 24,500

For roughing in dimensions see floor furnace specification charts.

the story of Rheem

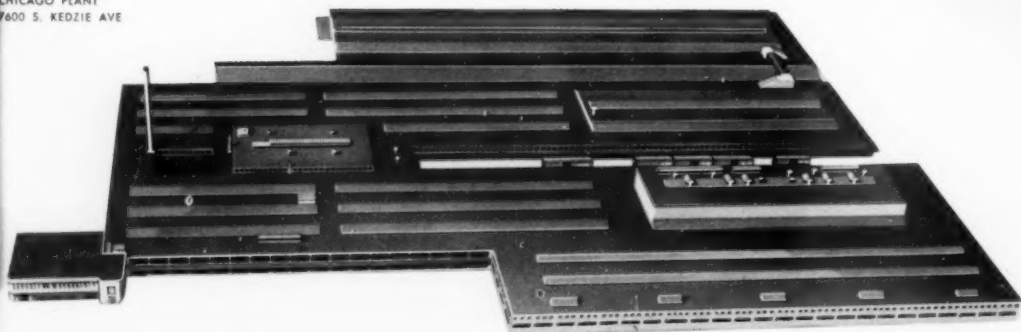
Throughout its quarter-century of existence, Rheem's history has been one of constant progress. Rheem has grown from a wooden shed on a water front weed lot in 1925 to the extent that Rheem products are now manufactured in eight modern plants in the United States as well as nine modern plants in foreign countries. Rheem's reputation has steadily widened until today the name is world renowned.

The most important reasons for these advances have been a fundamental desire to produce still better products and a con-

viction that to do so required the utmost attention to scientific development in every aspect of operation and production.

In addition to employing the best engineering available, Rheem has utilized the finest materials, the most skillful craftsmanship in construction of its products. It incorporates in these products the very latest advances in design plus the most recent developments in manufacturing methods—most of these developed by Rheem. Rheem talks top quality products because it has top quality products to offer.

CHICAGO PLANT
7600 S. KEDZIE AVE



RHEEM MANUFACTURING COMPANY

570 Lexington Avenue • New York 22, New York

SOLD THROUGH SELECTED HEATING WHOLESALERS. FOR FURTHER INFORMATION WRITE THE NEAREST RHEEM REGIONAL OFFICE.

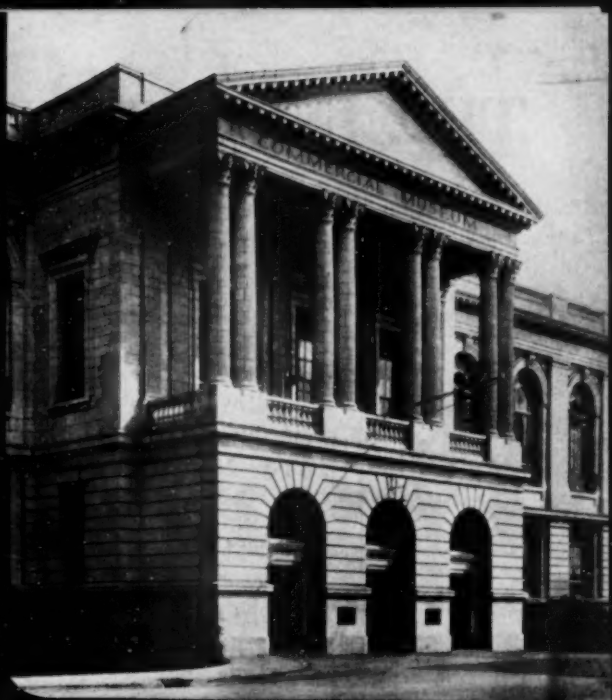
4361 Firestone Boulevard
South Gate, California

1025 Lockwood Drive
Houston 20, Texas

7600 South Kedzie
Chicago 29, Illinois

29-28 41st Avenue
Long Island City 1, N. Y.

Sparrows Point 19,
Maryland



PHILADELPHIA
January 22-26

THE INDUSTRY'S "BIG WEEK"

The Quick Picture

ASHVE MEETING

Technical sessions at 9:30 a.m. Monday, Tuesday, Wednesday and Thursday at the Bellevue-Stratford. Afternoon sessions at Convention Hall at 2:30 p.m. Tuesday and 2 p.m. Wednesday. See program for full information.

EXPOSITION

Opens Monday at 2 p.m. in the Commercial Museum, and daily Tuesday through Friday at 12 noon. Closing hour is 10:00 p.m., except on Friday at 6 p.m. See list of exhibitors and diagram of exhibit building for full information on "who, what and where."

ON THE LIGHTER SIDE

Welcome tea, 4 p.m., Sunday, Bellevue-Stratford. Get-together luncheon, 12:15, Monday, Bellevue-Stratford. Ladies tea, 3 p.m., Monday, John Wanamaker's. Informal party and buffet supper, 7 p.m., Monday, Hotel Benjamin Franklin. Ladies "brunch", 10:30 a.m., Tuesday, Warwick Hotel, followed by bus tour of historic spots at 11:00 a.m. Luncheon and fashion show, 12:30 p.m., Wednesday, Warwick Hotel. Annual banquet, 7 p.m., Wednesday, Bellevue-Stratford. Bus trip to Atlantic City for ladies, leaving Bellevue-Stratford at 10:30 a.m., and Benjamin Franklin at 10:35, Thursday.

PROGRAM FOR ASHVE'S 57TH ANNUAL MEETING

Saturday—January 20

- 10:00 a.m. Committee on Research, R. C. Cross, *Chairman*
(Bellevue-Stratford—Green Room)
1:30 p.m. Executive Committee of Council (Bellevue-Stratford—Room 108)

Sunday—January 21

- 10:00 a.m. REGISTRATION (Bellevue-Stratford—Oak Room)
10:00 a.m. Council Meeting (Bellevue-Stratford—Green Room)
12:15 p.m. Admission and Advancement Committee Luncheon
(Bellevue-Stratford—Room 104)
4:00 p.m. Committee on Research (Bellevue-Stratford—Room 108)
4:00 p.m. Welcome Tea (Bellevue-Stratford—North Garden and Foyer)
Hostesses: Mmes. A. J. Nesbitt, F. H. Buzzard, E. H. Dafter, M. G. Kershaw, J. W. McElgin, E. K. Wagner

Monday—January 22

- 9:00 a.m. REGISTRATION (Bellevue-Stratford—Oak Room)

9:30 a.m. FIRST SESSION (Bellevue-Stratford—Rose Garden)

Pres. Lester T. Avery presiding
Welcome to Philadelphia
Response by President Avery
Reports of Officers and Council
Losses from a Floor-Type Panel Heating System, by F. W. Hutchinson, D. L. Mills and L. J. La Tart
Operating Experience and Data from Sidewalk Snow-Melting System, by L. A. Stevens and G. D. Winans
Analysis of Air and Panel Cooling Systems, by Charles S. Leopold

12:15 p.m. GET-TOGETHER LUNCHEON (Bellevue-Stratford—Ballroom)

Speaker: Dr. Lillian M. Gilbreth. Subject: Management Problems in the Home

2:00 p.m. EXPOSITION—Opening of 10th International Heating and Ventilating Exposition (Commercial Museum)

Exhibit will open daily from 12 noon to 10:00 p.m., Tuesday to Thursday, and will close at 6:00 p.m. on Friday
ASHVE Booth No. 88

2:00 p.m. Chapters' Conference Committee—B. L. Evans, *Chairman* (Bellevue-Stratford—Junior Room)

2:00 p.m. TAC on Air Distribution, Ernest Szekeley, *Chairman* (Bellevue-Stratford—Room 104)

- 2:00 p.m. TAC on Combustion, T. H. Smoot, *Chairman* (Bellevue-Stratford—Room 108)
- 2:00 p.m. TAC on Cooling Load, W. E. Zieber, *Chairman* (Bellevue-Stratford—Room 105)
- 2:00 p.m. TAC on Panel Heating and Cooling, P. B. Gordon, *Chairman* and Group A. A. B. Algren, *Chairman* (Bellevue-Stratford—Green Room)
- 3:00 p.m. Ladies Tea with Entertainment
John Wanamaker's (*Greek Room*)
Hostesses: Mmes. A. J. Nesbitt, F. H. Buzzard, E. H. Dafter, M. G. Kershaw, J. W. McElgin, E. K. Wagner
- 4:00 p.m. TAC on Weather Design Conditions, W. M. Wallace, II, *Chairman* (Bellevue-Stratford—Blue Room)
- 7:00 p.m. TAC on Combustion, T. H. Smoot, *Chairman* (Bellevue-Stratford—Room 104)
- 7:00 p.m. "A Night with the Pennsylvania Dutch" (Hotel Benjamin Franklin—Ballroom)
- 12:00 p.m. Hot supper, buffet style, Pennsylvania Dutch dishes served from 7:00 p.m. to 12:00 p.m. in adjoining *Betsy Ross* and *Franklin Rooms*
- 8:30 p.m. "Papa Is All" (Pennsylvania Dutch Play)
- 10:00 p.m. Dancing (including square dancing with up-state Dutch old time caller)
- 12:00 p.m. Special entertainment
DON'T MISS THE SWAP SHOP: Bring a gimmick to swap for ????? We Dutch are sharp traders

Tuesday—January 23

- 8:30 a.m. TAC on the Heat Pump, R. C. Jordan, *Chairman* (Bellevue-Stratford—Room 107)
- 9:00 a.m. REGISTRATION (Bellevue-Stratford—Oak Room)
- 9:30 a.m. TECHNICAL SESSION (Bellevue-Stratford—Rose Garden) First Vice Pres. Lauren E. Seeley presiding
Report of Tellers of Election
The Efficiency of Bituminous Coal-Burning Space Heaters, by J. W. Tieman and F. L. Bagby
The Measurement of Smoke, by K. O. Beatty, Jr. and James E. Deas, Jr.
Report of Committee on Research—R. C. Cross, *Chairman*
Rating of Fuel Oils by a Test Unit, by D. W. Locklin and G. V. Parmelee
*Smoke Measurement in a Fuel Oil Test Unit, by D. W. Locklin and G. V. Parmelee
- 9:30 a.m. TAC on Industrial Ventilation, W. N. Witheridge, *Chairman* (Bellevue-Stratford—Room 108)
- 9:30 a.m. TAC on Sensations of Comfort, C. S. Leopold, *Chairman* (Bellevue-Stratford)
- 10:30 a.m. Ladies "Brunch" (Warwick Hotel)
Hostesses: Mmes. M. F. Blankin, W. P. Culbert, H. B. Hedges, C. F. Dietz, J. H. Hucker, R. F. Hunger, J. O. Kirkbride, H. H. Mather, R. D. Touton
- 11:00 a.m. Bus Tour of "Old and New Philadelphia and Historic Valley Forge"
Lv. from Warwick Hotel—Stops at Independence Hall, Betsy Ross House, The Chapel at Valley Forge, and Washington's Headquarters. Bus returns at 4:30 p.m.
- 12:15 p.m. Guide Committee Luncheon (Bellevue-Stratford—Pink Room)
- 12:15 p.m. Luncheon Meeting—TAC on Hot Water and Steam Heating, J. W. James, *Chairman* (Bellevue-Stratford—Room 105)
- 2:30 p.m. TECHNICAL SESSION (Convention Hall) Second Vice Pres. Ernest Szekely presiding
A Survey of Electrostatic Precipitation, by E. A. Walker and J. E. Coolidge
Theory of Earth Heat Exchangers for the Heat Pump, by L. R. Ingersoll, F. T. Adler, H. J. Plass, and A. C. Ingersoll
Factors Useful in Ground Grid Design for Heat Pumps, by George S. Smith
- 2:30 p.m. TAC on Heating Load, A. I. Brown, *Chairman* (Convention Hall)
- 2:30 p.m. TAC on Sorbents, John Everetts, Jr., *Chairman* (Convention Hall)
- 4:30 p.m. Committee on Research (Convention Hall)
- 7:00 p.m. Past Presidents' Dinner (The Union League, Broad and Sansom Sts.)

*To be presented by title.

Wednesday—January 24

- 8:00 a.m. Breakfast Meeting—TAC on Panel Heating and Cooling—Group D, J. S. Locke, *Chairman* (Bellevue-Stratford—Room 107)
- 9:00 a.m. REGISTRATION (Bellevue-Stratford—Oak Room)
- 9:30 a.m. TECHNICAL SESSION (Bellevue-Stratford—Rose Garden) Pres. Lester T. Avery presiding
Symposium—Nathaniel Glickman, *Moderator*
Subject: "Man and His Relationship to Air"
Speakers: Dr. Eugene F. DuBois, Dr. Robert W. Keeton, Charles S. Leopold, Capt. Oscar Schneider, and Prof. Theodore Hatch
- 9:30 a.m. TAC on Heat Flow through Glass, R. A. Miller, *Chairman* (Bellevue-Stratford—Room 104)
- 9:30 a.m. TAC on Insulation, M. W. Keyes, *Chairman* (Bellevue-Stratford—Room 105)
- 12:30 p.m. Luncheon and Fashion Show (Warwick Hotel)
Hostesses: Mmes. C. S. Leopold, M. E. Barnard, L. M. Church, John Everetts, Jr., J. H. Hucker, L. E. Moody, Ludwig Mack, W. S. Scott
- 12:15 p.m. Nominating Committee Meeting (Bellevue-Stratford—Blue Room)
- 2:00 p.m. TECHNICAL SESSION (Convention Hall) First Vice Pres. Lauren E. Seeley presiding
Field Studies of Heat Losses from Concrete Floor Panels, by C. M. Humphreys, C. V. Franks and L. F. Schutrum
Principles of Effective Heat for Steam Heated Structures, by C. O. Mackey, N. R. Gay, R. D. Tutt, E. G. Powell and E. L. Broderick
Transportation Heating and Air Conditioning Systems and Controls, by N. O. Kirkby
*Water-Vapor Permeability of Building Papers and Other Sheet Materials, by E. R. Bell, M. G. Seidl and N. T. Krueger
- 7:00 p.m. ANNUAL BANQUET (Bellevue-Stratford—Ballroom)
Toastmaster: Merrill F. Blankin, past president of ASHVE
Presentation of Past President's Emblem to Lester T. Avery

Thursday—January 25

- 9:00 a.m. REGISTRATION (Bellevue-Stratford—Oak Room)
- 9:30 a.m. TECHNICAL SESSION (Bellevue-Stratford—Rose Garden) Treas. Reg. F. Taylor presiding
Use of Aircraft Propellers for Axial Flow Fans, by E. C. Lundquist and M. J. Hamilton
Roof Spray for Reduction in Transmitted Solar Radiation, by G. E. Sutton
Solar Energy Transmittance of Figured Rolled Glass, by G. V. Parmelee and W. W. Aubele
Installation of Officers
Unfinished Business
New Business
Resolutions
Adjournment
- 10:30 a.m. Ladies Bus Trip to Atlantic City
Lv. Bellevue-Stratford at 10:30 a.m.
Lv. Benjamin Franklin at 10:35 a.m.
Luncheon at Captain Starns
Lv. Atlantic City at 4:00 p.m.
Ar. Philadelphia 6:00 p.m.
- 12 noon Committee on Research Luncheon (Bellevue-Stratford—Blue Room)
- 12:30 p.m. Council Luncheon Meeting (Bellevue-Stratford—Pink Room)

Friday—January 26

- 12:00 p.m. EXPOSITION—10th International Heating and Ventilating Exposition (Commercial Museum—Closes at 6:00 p.m.)

Saturday—January 27

- 3:00 p.m. Post Meeting Cruise (Bermuda and Nassau)
Sail from New York on "Queen of Bermuda" (Ar. back in New York on February 3 at 9:00 a.m.)

*To be presented by title.

EXPOSITION EXHIBITORS AND THEIR EXHIBITS

HERE ARE THE names of the exhibitors who are scheduled for the 10th Air Conditioning Exposition — the International Heating & Ventilating Exposition, per latest advice at press time from the exposition management. Those listed with information on the products they will exhibit and the names of representatives who will be in

attendance furnished these details direct to the publisher. With the booth numbers and the accompanying diagram of the exhibit hall, each exhibitor is easily located.

The exposition is under the management of the International Exposition Co., Charles F. Roth, manager, E. K. Stevens, associate manager.

A-J MFG. CO., 2119 Washington, Kansas City 8, Mo.—Booth 436

In attendance: Antone Artmaier, Jess Miller, Ernest Preuit, Arthur S. Hurt, Jr.
Exhibiting: Registers, grilles and diffusers. Vertical fin single leaf register and right- and light-proof grille will be featured.

A-P CONTROLS CORP., (formerly Automatic Products Co.), 2450 N. 32nd St., Milwaukee 45, Wis.—Booth 213

In attendance: R. W. Johnson, E. A. Vallee, A. A. Schubert, B. T. Carroll, F. J. Marshall, A. L. Neva, H. D. Youmans, R. E. Petersen, R. W. Sloane, A. L. Topp, S. Burghoff.

Exhibiting: Refrigeration and air conditioning controls; gas heating controls; oil heating controls. "Gasapack"; thermoelectric valve; thermostatic expansion valve; and oil heating solenoid valve will be featured.

ACE ENGINEERING CO., 1435 W. 15th St., Chicago 6, Ill.—Booth 422

In attendance: I. L. Schurman, J. W. Cowan, R. W. Bardach.

Exhibiting: Horizontal rotary oil burners for industrial and commercial use. Modulating "Uniflow" valve for viscosity compensation and straight line modulation (a standard feature of the exhibitor's "Uniflow" oil burners for No. 6 oil); new packless type manifold to facilitate field installation of No. 6 oil jobs; and combination gas-oil burner (commercial and industrial) will be featured.

ACME INDUSTRIES, INC., 600-618 N. Mechanic St., Jackson, Mich.—Booths 26 & 414

In attendance: C. N. Rink, J. T. Maloney, C. W. Millson, W. R. Funk, E. B. Dunphy, A. B. Newton, G. L. Baldwin, D. G. Merrill, P. A. Weatherwax, K. A. Weatherwax.
Exhibiting: "Dry-Ex" water chiller, shell and coil condensers, shell and tube condensers, oil separators, heat exchangers, "Bio-Cold" industrial unit cooler, evaporative condenser, and cooling tower. "Flow-Cold" liquid chiller and convectors will be featured.

ADELTA MFG. CO., INC., N. W. cor. 21st & Ellsworth Sts., Philadelphia 46, Pa.—Booth 513

In attendance: Martin Corbman, A. Corbman, Robert Corbman, Lewis Sobel, M. Goodman, Milton Parmet, Martin Posner, Gerald Schafer, Angelo Fasulo, Albert Derago.
Exhibiting: Prefabricated air conditioning duct and fittings, furnace pipe and fittings, and featuring one-piece snap-lock cleat.

AEROFIN CORP., 410 S. Geddes St., Syracuse 1, N. Y.—Booth 226

AFFILIATED GAS EQUIPMENT, INC.—see BRYANT HEATER DIV.

AIR CONDITIONING & REFRIGERATION NEWS, 450 W. Fort St., Detroit 26, Mich.—Booth 932

Exhibiting: Publication.

AIR CONTROL PRODUCTS, INC., Coopersville, Mich.—Booth 78

In attendance: Robert L. Leigh, Kenneth L. Babcock, Winston A. Clark, Donald E. Stoll, Claude E. Denton, Clark C. Hackenbruch, Clyde D. Allan.
Exhibiting: Registers, floor registers, ceiling registers, ceiling diffuser dampers, ventilators, grilles. A new style roof ventilator will be featured.

AIR CONTROLS, INC., DIV. OF CLEVELAND HEATER CO., 2310 Superior Ave., Cleveland 14, Ohio—Booth 401

In attendance: B. G. Krause, S. S. Minnich, G. L. Schwarz, N. Busch, E. Frick.
Exhibiting: Furnace blowers, blower filter units, propeller fans, exhaust fans, window fans.

AIR DEVICES INC., 17 E. 42nd St., New York 17, N. Y.—Booths 106-108

In attendance: C. N. O'Day, G. J. Sweeney, T. A. Hughes, P. G. Daves, C. A. Eades, I. M. Day, Jr.
Exhibiting: "Agitair" air filters, grease filters, air diffusers (square, rectangular, circular); dampers, gravity roof top ventilators, and featuring diffuser-light fixtures.

AIR-MAZE CORP., 5200 Harvard Ave., Cleveland 5, Ohio—Booth 610

In attendance: W. B. Watterson, N. L. Lamprecht, J. D. Thomas, H. M. Flaherty.
Exhibiting: Permanent, cleanable type air filter panels; "Electromaze" electric air filter.

AIR & REFRIGERATION CORP., 475 Fifth Ave., New York 17, N. Y.—Booth 33

In attendance: Walter L. Fleisher, Daniel C. Lindsay, Harvey S. Dutcher, Joseph H. Burges, Harry C. Jones, Robert P. Perillo, Joseph S. Perillo, Leslie N. Leland.
Exhibiting: Capillary unit (air washer); insulated panels; dampers. Plastic cells for Capillary unit for special conditions will be featured.

AIRTEMP DIV.—see CHRYSLER CORP.

AIRTHERM MFG. CO., 700 S. Spring Ave., St. Louis 10, Mo.—Booth 233

In attendance: N. B. Barsha, B. Bronnemeier, F. P. Kuhlitz, R. O. Reeves.
Exhibiting: Convectors; propeller fan type steam unit heaters; centrifugal fan type steam unit heaters; and gas and oil direct fired space heaters.

ALDRICH CO., Wyoming, Ill.—Booths 330-332

In attendance: P. M. Stephenson, E. L. Fox, L. R. Williams, B. Mulder.
Exhibiting: "Heat-Pak" steel heating boiler burner units, oil fired and gas fired; high pressure conversion oil burners. Line of boilers incorporating burner interchangeability with the possibility of converting from oil to gas or vice versa simply and quickly without changing boiler setup, as mounting provision for oil burner and gas burner are similar, will be featured.

ALLIS-CHALMERS MFG. CO., Box 512, Milwaukee 1, Wis.—Booth 917

In attendance: A. D. Brown, J. R. Allen, R. H. Black, N. L. Danforth, H. E. Dickinson, A. L. Edwards, J. H. Hadley, J. F. Jenkins, L. H. States, W. H. Taylor, W. J. Weaver, L. F. Ballone, W. A. Meyer, J. Cable, F. J. Geiger, M. L. Mordock, W. Brixius, R. N. Brown.
Exhibiting: Redesigned fractional horsepower pump unit; a drip-proof, open-type, general purpose "Safety Circle" induction motor equipped with automatic "Van-Pitch" drive operating a blower; a cutaway of the same motor; a cutaway of a redesigned close-coupled "Electrifugal" pump and motor; starter controls.

AMERICAN AIR FILTER CO., INC., 215 Central Ave., Louisville 8, Ky.—Booths 902-906

In attendance: Howard Pound, H. J. Noles, James May, Charles Wright, Charles Beatty.
Exhibiting: Electronic precipitators; self-cleaning air filters; washable air filters; disposable air filters; residential electronic air filters. "Electro-Klean" electronic air filter using disposable dry-type filter cells as the collector media will be featured.
Also see Herman Nelson Div.

AMERICAN ARTISAN, 6 N. Michigan Ave., Chicago 2, Ill.—Booth 12

In attendance: Frank P. Keeney, Chas. E. Price, Wallace J. Osborn, Robert A. Jack, George C. Cutler, James D. Thomas, John E. Peterson.
Exhibiting: American Artisan, technical books, market data.

AMERICAN BLOWER CORP., Detroit 32, Mich.—Booth A

Exhibiting: "Surocco" ventilating fans.

AMERICAN GAS ASSOCIATION, 420 Lexington Ave., New York 17, N. Y.—Booth 518

In attendance: Clifford E. Hall.
Exhibiting: Institutional exhibit for the gas industry.

AMERICAN HYDROVAC, PUMP DIV. OF PITZ FOUNDRY, INC., 290 Scholes St., Brooklyn 6, N. Y.—Booth 47

AMERICAN IRON AND STEEL INSTITUTE —see COMMITTEE ON STEEL PIPE RESEARCH

AMERICAN MACHINE & METALS, INC.—see DeBOTHEZAT FANS DIV.

AMERICAN RADIATOR & STANDARD SANITARY CORP., P. O. Box 1226, Pittsburgh 30, Pa.—Space B

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS, 51 Madison Ave., New York 10, N. Y.—Booth 88

AMES IRON WORKS, Oswego, N. Y.—Booths 22 & 43

In attendance: J. J. Doyle, D. F. Lytle, C. A. Ferguson, F. H. Fox, J. A. East, R. C. Kratz, H. F. Winters, O. S. Williams.
Exhibiting: A 25 hp completely automatic, packaged type, light oil fired steam generator designed for 100 lb steam working pressure.

ANDERSON CO., V. D., 1935 W. 96th St., Cleveland 2, Ohio—Booth 630

In attendance: William J. Gleason, Jr., Ralph E. Sams.
Exhibiting: "Super-Silvertop" steam traps, "Silvertop" air release valves, Y type pipe line strainers, float type traps, and featuring new small high pressure forged steel steam traps.

ANEMOSTAT CORPORATION OF AMERICA, 100 E. 39th St., New York 16, N. Y.—Booth 60

In attendance: F. Honerkamp, G. R. Wallen, R. F. Hayes, C. M. Wilson, W. F. Peters, V. F. Self.
Exhibiting: Air diffusers.

ANTHRACITE INSTITUTE, 237 Old River Rd., Wilkes-Barre, Pa.—Booths 147 & 150

In attendance: Truman M. Dodson, J. E. Axeman, W. S. Anderson, W. H. Douglas, W.

R. Frye, A. H. Noll, Oscar Ettari, O. C. Bailey, Ora Jenkins, H. G. Gabel, George Warner, Ralph S. Dunne, C. I. Dissinger, Guy Winters, Glen Blank, John D. Wentz, F. L. Cassel, C. H. Olandt, George E. Luder, A. T. Bertolotto, H. D. Merrill, R. H. Loomis, J. F. Fisher, W. F. Bowen, L. C. Bowen, T. G. Bridge, G. L. Brown, J. T. Gillespie, E. W. Goringe, A. F. Ludolph, R. E. Rawles, R. M. MacDonald, A. C. Traub, J. R. Kemp, J. D. Merrill, J. T. Letkey.

Exhibiting: Automatic anthracite heating equipment; "Anthratable"; warm air furnace-stoker units, stokers; boiler burner units.

APPLEMAN GLASS WORKS, Bergenfield, N. J.—Booth 448
In attendance: Leon Appleman, Kenneth Appleman.
Exhibiting: "Electriglas" radiant heating panels, exhibited for the first time at International Heating & Ventilating Exposition.

APRIL SHOWERS CO. INC., 4126 Eighth St., N. W., Washington 11, D. C.—Booth 727
In attendance: M. Bigelow MacPherson, I. E. Leininger, J. T. Butler, Mr. Proctor, Leonard H. Holder.
Exhibiting: Automatic roof cooling system; new "Apsco" electric hydraulic timer for saving water; air cleaned sprays for remote compressed air cleaning. Timer for balance of precipitation against the period of evaporation, and demonstrator for showing air cleaning of sprays remotely will be featured.

ARMSTRONG CORK CO., Lancaster, Pa.—Booths 538-540
In attendance: J. W. Liddell, S. C. Martin, H. J. Row, E. E. Tanguy, F. D. Rupprecht, F. L. Grant, A. P. Tingle, R. S. Broas, J. F. Isaacs, P. M. Hummer, V. J. Amorose, J. F. Boyd, H. J. Copstick, A. L. Hanglater, H. N. Urban.
Exhibiting: Corkboard; cork covering; heat insulation products; roof insulations, including "Temlok", corkboard and asphalt impregnated "Temlok." An insulating firebrick combustion chamber will be featured.

ARMSTRONG FURNACE CO., 851 W. Third Ave., Columbus 9, Ohio—Booths 122-126
In attendance: L. G. Hickok, F. W. Vaughn, H. G. Hays, George Zimbelman, H. C. Galleher, G. B. Lytle, T. M. Gallagher, P. Y. Matthews, S. H. Levine.
Exhibiting: Gravity, basement model and "Hi-Boy" units in residential sizes for gas and oil firing. The units all have rather recent design changes, and the oil fired units will be making their first appearance.

ARMSTRONG MACHINE WORKS, Three Rivers, Mich.—Booth 205
In attendance: A. E. Armstrong, T. H. Rea, O. E. Ulrich.
Exhibiting: Steam traps, air traps, unit steam humidifiers, heating controls, refrigerant gas purgers, and featuring "Thermoflo" heating controls for forced circulation water systems.

ARMSTRONG PRODUCTS CORP., 1st St. and 7th Ave., Huntington 1, W. Va.—Booths 636-638
In attendance: L. O. Reese, M. S. Nicholson, W. W. Chatfield, J. Blaine Kelsey.
Exhibiting: Representative models from line of gas fired space heaters, including new fan-equipped vented circulators which will be shown for the first time.

ATLANTIC PIPEBENDING & FABRICATING CORP., 552 River Rd., Edgewater, N. J.—Booth 646
In attendance: Samuel H. Nitzberg, John H. Macaulay.
Exhibiting: Radiant heating coils and bends, etc. It is planned to demonstrate a ball test on coils, with a steel ball 1/8 in. in diameter less than the inside diameter of the pipe passing through an entire coil with the aid of a little air pressure.

AUER REGISTER CO., 6600 Clement Ave., Cleveland 5, Ohio—Booth 847

In attendance: George R. Metzger, H. F. Curtis, W. H. Tonner, E. H. Ruppert.
Exhibiting: Warm air registers and grilles, air conditioning registers and grilles, perforated grilles (ornamental and decorative), clothes chute doors. New line of "Streamliner" air conditioning registers and grilles will be featured.

AU-TEMP-CO CORP., 521 Fifth Ave., New York 17, N. Y.—Booth 46

AUTOMATIC DEVICES CO. INC., 33 W. Jackson Blvd., Chicago 4, Ill.—Booth 713
In attendance: H. T. Kucera, O. W. Dubson, E. A. Hartnett, Curt Soderberg, Charles Andrews, Paul Buntin, Roy Snypp, Tom Burke, Tom Mansfield, Gene Clary, Gus Triolo, John Ridge.
Exhibiting: "Weather Man" weather actuated outdoor temperature regulator that determines indoor heating requirements in advance; "Weather-Chron" temperature actuated time switch that automatically changes the length of the heating day to match the weather. It is expected that "a new departure in hot water heating control" will be exhibited for the first time.

AUTOMATIC FIRING CORP., 4417 Oleatha Ave., St. Louis 16, Mo.—Booth 19
In attendance: James J. Lee, Sidney Strauss, F. J. Hollerbach, P. Oehler, E. Kuehn, J. Van-Dillen.
Exhibiting: "Cool-A-Matic" packaged air conditioner; "Fridge-A-Fire" combination heating and cooling unit; room cooler; "Gas-A-Fire" gas fired "Lo-Boy" furnace; "Oil-A-Fire" oil fired "Hi-Boy" furnace; domestic gas conversion burner; commercial gas conversion burner. "Dual-A-Fire" combination gas and oil unit, and "Fridge-A-Fire" packaged air conditioner operated by a semi-hermetically sealed compressor combined with a forced warm air furnace will be featured.

AUTOMATIC HUMIDIFIER CO., 19th & Main Sts., Cedar Falls, Ia.—Booths 52-54
In attendance: J. W. Galloway, W. E. Simpson, R. M. Galloway.
Exhibiting: "Thermo-Drip" and "Vaporite" humidifiers.

AVCO MFG. CORP.—see LYCOMING-SPENCER DIV.

AXEMAN-ANDERSON CO., Williamsport, Pa.—Booths 147 & 150

BACHARACH INDUSTRIAL INSTRUMENT CO., 7000 Bennett St., Pittsburgh 8, Pa.—Booth 219
In attendance: John W. Smith.
Exhibiting: Combustion testing instruments, including "Fyrite" kits and vaporizing burner adjusting kit as well as instruments for balancing heating systems. Among these will be "Tempscribe" temperature and operation recorder, "FloRite" direct reading velocity meter, and sling psychrometer. Neutral pressure point indicator; duplex kit made up of CO₂ and O₂ analyzers; dial type stack thermometer; and sling psychrometer will be featured.

BAKER REFRIGERATION CORP., South Windham, Me.—Booth 643

BALTIMORE AIRCOIL CO., INC., 715 W. Pratt St., Baltimore 1, Md.—Booth 621
In attendance: John Engalitcheff, Jr., Ray R. Forseille, Mrs. M. K. Kok, R. W. Pentecost, H. G. Curry.
Exhibiting: New line of evaporative condensers and cooling towers.

BARBER-COLMAN CO., 229 Loomis St., Rockford, Ill.—Booth 247
In attendance: C. J. Braatz, E. A. Greenlee, H. H. Kieckhefer, D. L. Dittloff, H. E.

Shugars, A. W. Schach, R. D. Richards.
Exhibiting: Automatic control and air distribution products for heating and air conditioning. New temperature regulating equipment and new air distribution products will be featured.

BARD MFG. CO., Bryan, Ohio—Booths 836-840
In attendance: Charles H. Tomes.
Exhibiting: Oil fired furnace equipment; gas fired furnace equipment; electric water heaters; gas water heaters.

BARNES & JONES, INC., 128 Brookside Ave., Boston 30, Mass.—Booth 83
In attendance: Walter E. Barnes, Eric Lund, Carl Larson, Norman Shaw, John B. Hogan, Walter Grono, Harry Eells, Everett Ryan.
Exhibiting: Thermostatic traps, float and thermostatic traps, radiator supply valves.

BEATON & CADWELL MFG. CO., New Britain, Conn.—Booth 328
In attendance: R. H. Hubbard.
Exhibiting: Safety valves (ASME type), self closing temperature and pressure valves, feed valves, reducing valves. Moving demonstration of safety relief valve and self closing temperature and pressure relief valve will be featured.

BELL & GOSSETT CO., 8200 N. Austin Ave., Morton Grove, Ill.—Booth 231
In attendance: E. J. Gossett, C. E. Pullum, R. E. Moore, R. A. Patterson, Frank C. Hackett, W. A. Boone, L. L. Arbuckle, Al Megg, M. Holmeister, L. J. Smith, Harold Lockhart, J. H. Hanley, J. A. Ivester, Kenneth Sprague, J. Harry Hall, Leroy Hokenson.
Exhibiting: "B & G Hydro-Flo" hot water heating specialties including boosters, heaters, valves, "Airtrol" system, "Comfort Control" system, etc. Also, industrial line of products such as heat exchangers, centrifugal pumps and refrigeration components.

BINKS MFG. CO., 3114-50 Carroll Ave., Chicago 12, Ill.—Booths 695-699
In attendance: Burke B. Roche, E. F. Watts, P. L. Griffin, John Rowe, C. R. Kranz, A. G. Stacy, James Doherty, George Allen, L. A. Hamilton, I. M. Day, Jr., I. M. Day, Jr., J. B. Starkweather.
Exhibiting: Comprehensive line of small mechanical draft and atmospheric cooling towers, in addition to a complete line of spray nozzles used for industrial applications.

BORG-WARNER CORP.—see INGERSOLL PRODUCTS DIV. and BOGE DIV.

BOSTON MACHINE WORKS CO., Lynn, Mass.—Booth 843

BROOKSIDE PRODUCTS CO., INC., McCordville, Ind.—Booth 421
In attendance: Claude Forth, Sr.
Exhibiting: Fans and blowers.

BROWN PRODUCTS CO., 97-12 Metropolitan Ave., Forest Hills, N. Y.—Booths 640-642
In attendance: A. Brown, M. Sterling, S. Schwartz, M. Portnoy, O. Mann, George Hench.
Exhibiting: Baseboard radiation; convectors; unit heaters; oil fired water heaters; boiler burner units. New design of recess convector will be featured.

BRUNDAGE CO., 512 N. Park St., Kalamazoo 11, Mich.—Booth 62
In attendance: H. F. Brundage, F. W. Brundage, P. S. Agey, W. T. Koehlinger.
Exhibiting: Blower assembly, blower-filter unit, "Air renewer."

BRYANT HEATER DIV., AFFILIATED GAS EQUIPMENT, INC., 17925 St. Clair Ave., Cleveland 10, Ohio—Booths 2 and 4
In attendance: J. M. Traugott, G. L. Miller, Burt Engle, Gus Gillette, Harry Griffith, Ray Mott, Larry Yost, Ken Shaw.

Exhibiting: Complete line of gas heating equipment, featuring "Model 428" fan circulator.

BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.—Booth 79

BUILDERS-PROVIDENCE, INC., 345 Harris Ave., Providence 1, R. I.—Booth 55

Exhibiting: "Shuntflo" meters; "Propelloflo" meter; "Flo-Watch"; "Flo-Gage"; "Shuntflo" meters measure steam, air or gas, "are valuable in cost accounting and detecting avoidable losses, frequently effect savings of from 10 to 30 percent"; "Propelloflo" meter measures flow of water and other liquids; the "Flo-Watch" is a differential meter for steam, air, gas, cold or hot water; the "Flo-Gage" is midgeit differential meter that measures liquids or gases.

BUNDY TUBING CO., 8109 E. Jefferson, Detroit 14, Mich.—Booth 325

In attendance: P. A. O'Connell, A. F. Bernthal, W. F. Kendall.
Exhibiting: Steel radiant heating coils, made from both plain copper coated and tinned "Bundywell".

BURNHAM CORP., BOILER DIV., 2 Main St., Irvington, N. Y.—Booths 223-225-227

In attendance: V. A. Good, F. R. Brophy, A. A. Miller, H. R. Way, J. J. Hogan, G. Frank Bacon, W. H. Phillips, W. C. Heagy.
Exhibiting: "Hy-Power Base-Ray" radiant base-boards; radiant radiator; slenderized radiator; "Pacemaker" oil boiler and oil heating unit; "Yellow-Jacket" oil boiler and oil heating unit; gas boiler.

BUSH MFG. CO., 179 South St., West Hartford, Conn.—Booth 817

In attendance: James W. Hatch, Charles T. Cavanaugh, David B. Zipsper, Alfred J. Houle, H. Russell Prescott, Frank C. Hawk, Cecil Boling, Norton Miller.
Exhibiting: Air handling unit; cooling tower; water coil; DX coil; steam coil; and non-freeze steam coil. Specially designed high pressure steam coil will be featured.

CAREY MFG. CO., PHILIP, Lockland, Cincinnati 15, Ohio—Booth 828

In attendance: W. D. Callan, J. J. Smiley, Jr., F. J. Smith, C. B. Berger, H. J. Peterson, E. S. Walls, J. H. Jones, H. K. Marcy, R. H. Wyatt, R. L. Gough, C. E. Howard, W. C. Bowman.
Exhibiting: Attic fans; kitchen and window ventilators; "Careyduct" asbestos duct for heating, piping and air conditioning systems.

CARRIER CORP., 302 S. Geddes St., Syracuse 1, N. Y.—Booths 605-607

CENTURY ELECTRIC CO., 1806 Pine St., St. Louis 3, Mo.—Booth 543

In attendance: G. C. Henderson, R. N. Hill, A. Neher, O. S. Imes, M. McInerney, W. J. Nace, G. H. Pechin, J. M. Hicks, G. E. Moe, E. W. Pritchard.
Exhibiting: A wide range of the various types and sizes of motors that are used particularly in the heating, ventilating and air conditioning industries. An SC 680 frame that contains motors in horsepower from 150 to 400 hp; a 225 SC disassembled motor with aluminum die cast rotor, a vertical fan motor with "Oil-Lite" bearings; a streamlined oil burner motor; and a cut-away of an integral horsepower gear motor will be featured.

CHACE CO., W. M., 1600 Beard Ave., Detroit 9, Mich.—Booths 322-324

CHAR-GALE MFG. CO., 4325 Hiawatha Ave., Minneapolis 6, Minn.—Booth 64

In attendance: L. C. Johnston, C. L. Johnston, D. E. Johnston, N. J. Dovolits.
Exhibiting: Warm air ducts and fittings; pipe and elbows; registers and grilles; humidifiers. Complete packaging of entire line of merchandise will be featured.

CHELSEA FAN & BLOWER CO. INC., 639 South Ave., Plainfield, N. J.—Booth 406

CHICAGO BLOWER CORP., 4558 W. Congress St., Chicago 24, Ill.—Booth 606

In attendance: F. H. Gohl, T. W. McManus.
Exhibiting: "Multiblade" exhausters; "Gyr-Flo" power exhausters; "Axial Flo" power exhausters.

CHICAGO PUMP CO., 2300 Wolfram St., Chicago 18, Ill.—Booth 534

In attendance: G. D. Bers, Milton Spiegel, H. E. Martin, L. M. Nechine, John C. Redmond.
Exhibiting: "Flush-Kleen" sewage ejector; complete line of close-coupled pumps (including 2 in. sectioned to show the construction); 6 in. split case double suction pump with casing opened; "Sure Return" condensation pump and receiver; duplex "Condo-Vac" vacuum and boiler feed pump; side suction mechanically sealed pump driven through flexible coupling. The "Sure Return" pump and receiver has been completely redesigned and will be exhibited for the first time. The close-coupled pumps have been redesigned, are more compact, and are equipped with a mechanical seal. The model of the "Flush-Kleen" sewage ejector has been refinished and modernized to demonstrate its clog-proof features. The side suction pump is one of an entirely new line for capacities up to 500 gpm and heads up to 215 ft.

CHRYSLER CORP., AIRTEMP DIV., 1600 Webster, Dayton 1, Ohio—Booth 301

In attendance: C. S. Stackpole, M. J. Leonard, M. T. Bard, William B. Magill, Ray Donley.
Exhibiting: Packaged air conditioning, central systems, gas and oil heating, room coolers, dehumidifiers, and featuring 11 ton packaged air conditioner.

CLARAGE FAN CO., 619 Porter St., Kalamazoo, Mich.—Booth 813

In attendance: C. O. Fory, H. N. Jacobs, R. P. Bird, A. L. Otis, E. A. Rehn, J. Q. Treadway, J. D. Crabtree, R. H. Seibert.
Exhibiting: Sprayed coil type air conditioner; high speed ventilating fan, ring oiling bearings (plain and water cooled); industrial exhaust fan, domestic furnace and air conditioning fan. The sprayed coil conditioner is new to the exhibitor's line.

CLAYTON & LAMBERT MFG. CO., 1701 Dixie Highway, Louisville 10, Ky.—Booth 744

In attendance: R. J. Miller, P. G. Pfrim, John B. Henderson, C. J. Davis.
Exhibiting: "Lameck" furnace pipe and fittings; "C & L" blow torches and fire pots; "Hoffman" water heaters.

CLEVELAND HEATER CO.,—see AIR CONTROLS, INC., DIV.

COAL-O-MATIC CO., Trucksville, Pa.—Booths 147 & 150

COLEMAN CO., INC., Wichita 1, Kans.—Booths 71-73

COLE-SEWELL ENGINEERING CO., 2288 University Ave., St. Paul 4, Minn.—Booth 620

In attendance: H. J. Sewell, I. E. Loring, E. W. Laudert.
Exhibiting: Draft governors; draft "Korektors".

COLUMBIA BURNER CO., 729 Ewing St., Toledo, Ohio—Booth 347

COMBUSTION CONTROL CORP., 77 Broadway, Cambridge 42, Mass.—Booth 69

In attendance: J. A. Long, B. E. Shaw, L. D. Sibley, D. S. Nichols, P. K. Ryder, P. N. Bredsen.

Exhibiting: A new development in industrial and commercial flame failure controls and safeguards for manually and automatically ignited oil and combination gas-oil burners will be introduced. "Fireeye" programming control with new "Fuetron" scanner for automatically ignited oil burners; flame failure safeguard system featuring the new scanner for manually and semi-automatically ignited oil burners; multiple scanner gas oven flame failure control, accommodating up to four scanners with a single relay control; new smoke indicator; and standard combustion safeguards will be on display.

COMBUSTIONEER DIV.—see STEEL PRODUCTS ENGINEERING CO.

COMMERCIAL FILTERS CORP., 18 W. Third St., Boston 27, Mass.—Booth 622

In attendance: R. L. Fielding, E. W. Dumler, J. R. Chisholm, J. V. Calhoun, Jr., Dean Stapp, Robert Schaller.
Exhibiting: "Fullflo" filters for oil burners for the elimination of trouble arising from minute solid impurities in heating oils; filters for lubricating oils, gasoline, oil burners, bulk plants, tank trucks, dispensing pumps. Effectiveness of the filters will be "dramatically demonstrated".

COMMITTEE ON STEEL PIPE RESEARCH, AMERICAN IRON AND STEEL INSTITUTE, 350 Fifth Ave., New York 1, N. Y.—Booth 539

In attendance: George D. Lain, E. Anderson, W. S. Badger, T. E. Conklin, G. H. Daman, Roy Grinter, D. E. Hutchinson, W. G. Laister, J. F. Macaulay, J. C. Mallory, R. Patterson, E. G. Souder, W. H. Taylor, C. W. Test, E. G. Weymouth.
Exhibiting: Steel pipe for heating systems. Radiant panel heating systems and snow melting installations will be featured.

CONDENSATION ENGINEERING CORP., 3511 W. Potomac, Chicago 51, Ill.—Booth 821

In attendance: M. M. Chester, C. W. Osburn, H. K. Allen, George Thompson.
Exhibiting: Prefabricated chimney. New style flue housing top and rain cap, designed to improve appearance, eliminate rain from entering the flue and help prevent down drafts, and a newly U. L. approved flue for basement installations with all types of fuel will be featured.

CONGRESS DRIVES DIV., TANN CORP., 3750 E. Outer Dr., Detroit 34, Mich.—Booth 21

In attendance: Stuart Chosid, Otis L. Johnson, Edward Tann, James J. Walsh.
Exhibiting: Pulleys, v-belts, pillow blocks, v-belt clutches, sheaves.

CONKEY CO., H. D.—see FIELD CONTROL DIV.

CONNOR ENGINEERING CORP., W. B., Danbury, Conn.—Booth 831

In attendance: John H. Bartol, Henry A. Baker.
Exhibiting: "Dorex" air recovery equipment, high pressure air diffusers, "Kno-Draft" adjustable air diffusers, and featuring new high pressure noiseless air diffusers.

CONTINENTAL AIR FILTERS, INC., 2720 Helm St., Louisville, Ky.—Booth 218

In attendance: William K. Gregory, M. L. Heeb, S. S. Emison, A. G. Mutimer.
Exhibiting: Automatic self cleaning air filters; washable, viscous, unit air filters; and filter cells for air washers.

COPELAND REFRIGERATION CORP., Sidney, Ohio—Booth 85

In attendance: H. E. Thompson, F. J. Gleason, W. G. Von Meyer, R. G. Berg, D. H. Bodine.
Exhibiting: "Copelamatic" and open type condensing units and compressors.

CORBMAN BROS., INC., 315 N. 7th St., Philadelphia 6, Pa.—Booth 617
In attendance: A. L. Corbman.
Exhibiting: Furnace pipe and fittings, air conditioning ducts and fittings, "Easy-Flo" system, extended plenum system.

C-O-TWO FIRE EQUIPMENT CO., U. S. Highway 1, Newark 1, N. J.—Booths 342-344

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.—Booths 305-307-309
In attendance: J. H. Geiss, J. P. McCarney, Frank Del Prete, W. D. Howard, D. J. Molloy, F. W. Vandenberg, J. A. Dwyer, C. T. Pollock, H. H. Simmons.
Exhibiting: New oil fired boiler for baseboard or panel heating; wet base oil fired boiler for utility room or basement installation; conversion type boiler for coal, oil or gas; "Crane-Line" gas fired boilers; "Crane-Line" warm air furnaces, gas and oil fired. A 1 ft baseboard segment which makes for flexibility of installation will be introduced; this unit, together with channelled wood baseboard and the standard 2 ft radiant and radiant convective type cast iron baseboards, simplifies inside and outside corner installations.

CROTTY MFG. CORP., 135-15 35th Ave., Flushing, N. Y.—Booth 134
In attendance: Michael C. Crotty, Michael J. Mintern, Edward Alstrom, Ralph J. Sibilla.
Exhibiting: Water wall and "D.B." boilers.

CURTIS REFRIGERATING MACHINE DIV. OF CURTIS MFG. CO., 1905 Kleinen Ave., St. Louis 20, Mo.—Booth 8
In attendance: H. C. Morrison, H. J. Nettler, J. P. Gilbert, K. T. Rockey, G. C. Helde, W. A. Fleischer, N. H. Behrend, G. W. Schultz, F. J. Hanley, R. M. Nelson.
Exhibiting: New 2 ton packaged air conditioning unit; new 40 hp compressor unit, complete with automatic capacity reduction; samples of new combination air and water cooled condensing units; cutaway model of compressor.

DEBOTHEZAT FANS DIV., AMERICAN MACHINE & METALS INC., East Moline, Ill.—Booth 440
In attendance: P. S. Mumford, F. C. Weicker, C. J. Gaspar, Ray Bouslough, M. Beline.
Exhibiting: Stainless steel "Bifurcator" fan, "Power Flow" roof ventilator, "Hy-Vac" air jet, stainless steel fan wheels, and featuring induced draft "Bifurcators".

DETROIT LUBRICATOR CO., 5900 Trumbull Ave., Detroit 8, Mich.—Booth 734 & Space B

DETROIT REGULATOR CO., 1742 Rivard, Detroit 7, Mich.—Booth 807
In attendance: Frank Kern, Jr., D. L. Zorn, D. B. Anderson, Tony Burman.
Exhibiting: "Maxitrol" low pressure gas appliance regulators, featuring an animated operating display of plastic models dramatizing actual operation of the regulators.

DEVICES, INC., 214 E. 53rd St., New York 22, N. Y.—Booth 75
In attendance: V. L. Yepsen, Harold N. Davis, Alex O'Hare, E. J. Hartman.
Exhibiting: "Miracle" surface anchors for attaching cork, "Fiberglass", "Foamglas" and batts to ducts, walls and ceilings.

DODGE CORP., F. W., 119 W. 40th St., New York 18, N. Y.—Booth 214

DOLE REFRIGERATING CO., 5910 N. Palms, Chicago 30, Ill.—Booth 806
In attendance: L. E. Smith, C. C. Ryan, O. J. Armstrong, A. F. Sawyer, A. B. Brady, E. C. Wilbur.
Exhibiting: "Ice-Cel" latent heat storage unit for air conditioning, chilling water, ice accumulator (to be shown in operation); heat exchangers; vacuum cold plates for all re-

frigeration purposes. "Ice-Cel" storage battery of refrigeration will be in operation and showing ice build-up. Its application for air conditioning for peak loads of short duration and "magic chart" showing how present systems can be rejuvenated and how it cuts costs and saves space will be featured.

DOLE VALVE CO., 1935 Carroll Ave., Chicago 12, Ill.—Booth 405
In attendance: J. Francis Lund, Henry Aronson, Willis Pennington, Albert Toll, Stuart G. Phillips.

Exhibiting: Air and vacuum valves, including new valve for hot water heating systems which is a completely automatic venting device. Thermostatic air control for individual room temperature control in forced warm air heated buildings, flow control valves, and water mixers for tankless heaters will also be shown.

DOLLINGER CORP., Rochester 3, N. Y.—Booth 408

DOMESTIC ENGINEERING CO., 1801 Prairie Ave., Chicago 16, Ill.—Booth 418
Exhibiting: Publication.

DOYLE VACUUM CLEANER CO., 225 Stevens St., S. W., Grand Rapids 2, Mich.—Booth 748

In attendance: Deway I. Doyle, Jr., Patrick E. Doyle, Harry E. Arnold, Harry E. Coffman.
Exhibiting: "Grand Rapids" furnace cleaners with attachments.

DRAVO CORP., Dravo Bldg., Fifth and Liberty Aves., Pittsburgh 22, Pa.—Booth 732

In attendance: D. R. Berg, W. L. Davidson, Dave Henderson, H. A. Pietsch, Jack Mason, W. R. Hoffman, P. Stephen, P. Tietjen, A. K. Kosarin, F. Gerhart, W. Smedley, H. K. Hicks, G. Beidler, W. P. Barrett, T. W. Eshbach.
Exhibiting: "Counterflo" direct fired air heater.

DUNHAM CO., C. A., 400 W. Madison St., Chicago 6, Ill.—Booth 718-722

In attendance: F. E. Schmidt, W. S. Browning, E. F. Ford, E. W. Cardiff, L. D. Mandell, J. A. Butler, E. G. Powell, H. S. Marshall.
Exhibiting: Unit heaters; convectors; baseboard; specialties; pumps; finned pipe radiation; "Metro" and "Vari-Vac" heating systems; New cabinet type unit heater, convectors, and "Fin-Vector" finned radiation will be featured.

DURANT INSULATED PIPE CO., 1015 Runnymede St., P. O. Box 88, East Palo Alto, Calif.—Booth 717

In attendance: A. H. Isenberg, William H. Buck.
Exhibiting: Prefabricated insulated pipe conduit and accessories. New insulating type plate anchor will be featured.

DWYER MFG. CO., F. W., 317 S. Western Ave., Chicago 12, Ill.—Booth 44
In attendance: F. W. Dwyer, J. G. Dwyer.
Exhibiting: Draft gages, CO₂ indicators and test sets, manometers, "Magnehelic" pressure gages, pitot tubes, "Vini-Float" air filter gages will be featured.

EAGAN CO., INC., WALTER H., 2336 Fairmount Ave., Philadelphia 30, Pa.—Booth 723

In attendance: David J. Smith, John McGonigal, Tobias Koch, Richard Meyer.
Exhibiting: Condensate pumps; boiler feed pumps; turbine pumps; centrifugal pumps. New low cost "Eagan Eagle" condensate pump, rated up to 8000 sq ft EDR at 20 psi, will be featured.

EASTERN FOUNDRY CO., Boyerscown, Pa.—Booth 314

ECKHART MFG. CO., INC., 931 Lehigh Ave., Union, N. J.—Booth 413
In attendance: Arnold Eckhart, Jr., Walter

Eckhart, A. Glicksman, A. T. August, H. Kilby, Sr., William Croker, Arthur E. Wood.
Exhibiting: "Silent Korth" oil burners, and featuring flange burner adaptable to all boiler-burner units.

ECONO PRODUCTS CO., 17 State St., New York 4, N. Y.—Booth 721

ELECTRIC FURNACE-MAN, INC., Emmaus, Pa.—Booths 147 & 150

EMERSON ELECTRIC MFG. CO., 8100 Florissant Ave., St. Louis 21, Mo.—Booth 317

In attendance: O. D. Metz, T. J. Greenan, W. R. Fraser, R. E. Otto, L. L. Schneider.
Exhibiting: 1/20 to 3 hp motors; exhaust and ventilating fans. Demonstration of new shielded starting switch for split-phase and capacitor-start motors will be featured.

EMPIRE STOVE CO., 918 Freeburg Ave., Belleville, Ill.—Booth 60

In attendance: Lee A. Brand, Robert H. Ewing, L. J. Rodauch, Ray Mills, George R. Strode, Ward Williams.
Exhibiting: Gas floor furnaces; gas recessed heating systems. Zone heating by using recessed heating system will be featured.

FAIRBANKS CO., 393 Lafayette St., New York 3, N. Y.—Booth 933

In attendance: W. F. Guthrie, W. T. Rogers, G. R. Sternfeld, Herbert Jones, J. C. Valentine, L. M. Nelienger, L. C. Managali, N. F. Unmuth, J. J. Langan, A. W. Hoogs.
Exhibiting: Bronze valves, iron body valves, solder end bronze valves, "Fairco-Brate" threadless bronze valves, "Faircoval" bronze valves, "Dart" malleable iron unions and union pipe fittings, "Pic" steel unions, two wheel hand trucks, platform hand trucks, pressed steel casters. It is planned to feature the solder end bronze valves and the threadless bronze valves. A new 150 lb throttle-port bronze globe valve and a new 300 lb bronze gate valve will also highlight the exhibit.

FAIRBANKS, MORSE & CO., 600 S. Michigan Ave., Chicago 5, Ill.—Booth 539

In attendance: William F. Bowen, Loin C. Bowen, Thomas G. Bridge, George L. Brown, Thomas Gillespie, Edward W. Goringe, August F. Ludolph, Ralph E. Rawles, Russell M. MacDonald, A. C. Traub, J. R. Kemp, J. D. Merrill, J. T. Letkey.
Exhibiting: Oil, gas, and coal fired furnaces, "Lo-Boy" and "Hi-Boy"; oil and gas fired suspended units; conversion oil and conversion gas burners; oil, gas, coal fired and all-fuel boilers; anthracite bin-feed stokers. Horizontal suspension furnace, either gas or oil, which can be converted from a suspended unit to a floor installation by simply standing the unit in an upright position and turning the burner, controls and inspection plate 90 deg, and designed for installations where the saving of floor space is desired or necessary, i. e. filling stations, garages, basement homes (put it into the rafters), etc., will be featured.

FARR CO., 2615 Southwest Dr., Los Angeles 43, Calif.—Booth 18

In attendance: R. S. Farr, F. X. Shea, W. H. Welty, E. Kirkpatrick, H. J. Kennedy.
Exhibiting: "Far-Air" self-washing filter, other air filters, grease eliminator.

FASCO INDUSTRIES, INC., P. O. Box 509, Rochester, N. Y.—Booth 334

FEDDERS-QUIGAN CORP., 57 Tonawanda St., Buffalo 7, N. Y.—Booths 42 and 63

In attendance: Robert E. Cassatt, F. A. Mitchell, Ted Nemes, H. G. Williams, E. M. Becker, J. H. Seippel, J. D. Hayes, F. G. Stock, M. Frank.
Exhibiting: Room air conditioners, baseboard radiation, wall radiation, convective radiators, electric water coolers.

FEDERAL BOILER CO., Midland Park, N. J.—Booth 810

In attendance: Ray Shuster, James Legg, Oscar Mann, Sol Mattuck, Ray Rathe, F. Murphy.
Exhibiting: Complete line of boilers for steam, hot water or radiant heat.

FIELD CONTROL DIV., H. D. CONKEY CO., Mendota, Ill.—Booth 708
In attendance: C. W. Potter, Lee N. Beardsley, R. Millholland, W. Hirsch.
Exhibiting: Barometric draft controls.

FITZGIBBONS BOILER CO., INC., 101 Park Ave., New York 17, N. Y.—Booth 513
In attendance: Paul K. Addams, John R. Collette, Gilbert Nelligan, G. E. Olsen, R. C. Malvin, E. N. Black III, W. C. Wetherstone, Jr., F. J. McCusker.
Exhibiting: Gas fired and oil fired boilers. Scotch marine boiler, "R.Z.U. Junior" boiler. Residential boiler with 66,000 and 77,000 Btu per hr SBI net ratings, AGA approved gas fired units, and Scotch marine boiler will be featured.

FOREST CITY FOUNDRIES CO.—see NIAGARA FURNACE DIV.

FRICK CO., Waynesboro, Pa.—Booth 92
In attendance: Cyril Leech, Russell Moore, P. H. Buch, W. O. Kline, M. W. Garland, M. B. Watts, W. H. Aubrey, G. E. Elden, W. L. Bain, Terry Mitchell, C. C. Smith, R. M. Shuford, W. J. Dugas, R. T. Snively, J. T. Murphy.
Exhibiting: 5 hp unit air conditioner, four cylinder "Eclipse" compressor cut-away and operated in slow motion by a geared motor, a new nine cylinder compressor which has never been exhibited before, photographs of installations.

FRIGIDAIRE DIV., GENERAL MOTORS CORP., 300 Taylor St., Dayton 1, Ohio—Booth 68
In attendance: B. C. Wagner, C. F. Wood, E. J. Boyer, R. Woodward, H. E. Martin, C. R. Purnhagen, R. G. Bachman, L. J. Krantz.
Exhibiting: Representative models of broad air conditioning lines, including 1/2 and 1 hp window room units; a remote floor type room unit; 3 and 10 ton packaged units; large and small capacity reciprocating compressors; "Multipath" cooling units; a dehumidifier; and an operating water cooler. An interesting highlight of the exhibit will be an operating cutaway model of the 3 ton conditioner. In addition, window room units will be equipped with transparent plastic tops so that visitors can watch models in operation. A cutaway dehumidifier and water cooler will also be operating.

FUELOIL & OIL HEAT, 232 Madison Ave., New York 16, N. Y.—Booth 939
Exhibiting: Publication.

FULTON SYLPHON DIV., ROBERTSHAW-FULTON CONTROLS CO., Knoxville 4, Tenn.—Booths 429-431

GANNON CO., INC., RUSSELL B., 5037 Beech St., Cincinnati 12, Ohio—Booth 938
In attendance: Russell R. Gannon, S. E. Hager, B. N. Cryder.
Exhibiting: Corridor and under-window classroom unit ventilators, and featuring "Inertia Type" air conditioning system and "Pressurizing" heating, ventilating and air conditioning unit.

GAS HEAT MAGAZINE, 17 E. 37th St., New York 16, N. Y.—Booth 939
Exhibiting: Publication.

GENERAL BLOWER CO., Monon Grove, Ill.—Booth 232
In attendance: W. W. Meyer, C. J. Yamas, J. J. Ferretti.
Exhibiting: Fans and blowers.

GENERAL CONTROLS CO., 801 Allen Ave., Glendale 1, Calif.—Booth 702
In attendance: J. F. Ray, W. A. Ray, Fred E. Weldon, B. L. Lerch, Roger Rosell, R. M. Korry, R. C. Boehm, Douglas Sterner, J.

Fallon, Charles Taber, C. McCarthy, C. C. Tischler, Paul Palmgren, R. L. Strongman, J. Coleman, W. L. Buck, Fred Angier, Jay Miller.
Exhibiting: Automatic controls for heating, refrigeration, air conditioning and industrial applications. Thermostats, solenoid valves, relays, motor valves, low water cutoffs, expansion valves, limit controls, regulators and diaphragm valves will be featured.

GENERAL ELECTRIC CO., Air Conditioning Dept., 5 Lawrence St., Bloomfield, N. J.—Booth 601
In attendance: M. J. Hackney, H. N. McMenimen, Jr., R. J. Walsh, E. V. Whiteley.
Exhibiting: Residential heating equipment; year 'round air conditioning; central plant air conditioners; condensing units. Multi-room air conditioning system for office buildings and hotels and year 'round air conditioning for homes will be featured.

GENERAL FILTERS, INC., 12890 Westwood Ave., Detroit 23, Mich.—Booth 415
In attendance: Robert G. Gregory, Roland A. Redner, Mrs. Grace Redner.
Exhibiting: Three models of fuel oil filters, and featuring large capacity filters for fuel oil.

GENERAL FITTINGS CO., 123 Georgia Ave., Providence 5, R. I.—Booth 434
In attendance: Horace F. Horton, Jack Jones, Lynn Roberts, John J. Cotter, Vaughn Gooding, Charles A. Maine, Bill Simms, Bob Hull.
Exhibiting: Tankless water heaters; industrial instantaneous water heaters; thermostatic mixing valves; "Testite" solder fittings; water hammer silencers. New all-copper tankless heater with fiber glass insulation and metal outer jacket will be featured.

GENERAL MOTORS CORP.—see FRIGIDAIRE DIV.

GENERAL PLATE DIV.—see METALS & CONTROLS CORP.

GENERAL REFRIGERATION DIV., YATES-AMERICAN MACHINE CO., Beloit, Wis.—Booth 719
In attendance: Jack Gallagher, Clark F. Oliver, Clarence H. Smith, Harold Hayhurst.
Exhibiting: Home air conditioner; room air conditioner; store air conditioner.

GLASFLOSS DIV., TILO ROOFING CO., INC., 155 E. 44th St., New York 17, N. Y.—Booth 447
In attendance: R. R. Pryor, H. M. Radio, W. E. Grasberger, B. J. Brady.
Exhibiting: Throwaway filters (metal frame and chipboard type). A metal frame throwaway air filter made with glass fibers is a new product.

GOODFELLOW CO., INC., E. D., 496 E. Bodley St., Memphis 2, Tenn.—Booth 222
In attendance: F. E. Cunaway, R. S. Stover, E. D. Goodfellow.
Exhibiting: Induced draft cooling towers. Centrifugal fan cooling towers in sizes from 5 to 50 tons capacity, available with or without "Uni-drive", have been added to the line.

GOVERNOR CO., 513 N. Blackwelder, Oklahoma City, Okla.—Booth 954
In attendance: William H. Hollingsworth, W. A. Quinn.
Exhibiting: Twin 20 ton completely packaged air conditioner, evaporative condenser, cooling tower, coils.

GREENLEE TOOL CO., 2136 Twelfth St., Rockford, Ill.—Booth 809
In attendance: Ray Samuelson, Adolph Hawkinson, George Walter Davis, Andrew Kirby, George Krause, Ben Halliday, Bill Spear.

Exhibiting: Mechanical and hydraulic benders for radiant heating and other purposes operated by hand and power; woodboring tools for boring holes for pipe by hand or with power; auger bits, car bits, chisels, gouges, draw knives, hand and power driven knock-out punches, multi-spur machine bits, and mortising, boring and routing tools. An automatic power driven bender that bends 5 in. pipe or conduit to 90 deg in 2 min will be shown.

GRINNELL CO., INC., 260 W. Exchange St., Providence 1, R. I.—Booth 531
Exhibiting: Pipe hangers, pipe fittings, welding fittings, constant support hangers, "Thermolier" unit heaters, prefabricated piping, diaphragm valves, spring hangers.

GUSTIN-BACON MFG. CO., 1412 W. 12th, Kansas City 7, Mo.—Booth 736
In attendance: J. B. Weltmer, M. F. Hauserman, Jr., R. C. Harden, R. L. Harden, Barth Gilchrist.
Exhibiting: "Ultralite" duct insulation and duct liner. A practical demonstration of the sound absorbing characteristics of the duct liner and a unique way of applying both the duct liner and duct insulation will be shown.
HARRIS & CO., ARTHUR, 212 N. Aberdeen St., Chicago 7, Ill.—Booth 326
In attendance: George C. Harris.
Exhibiting: Copper and stainless steel floats.

HART & COOLEY MFG. CO., 500 E. 8th St., Holland, Mich.—Booth 699
In attendance: R. W. Blanchard, G. D. Heeringa, Miss Irma F. Zeeb, J. H. Van Dyke, E. J. Rowder, Howard H. Eddy, Richard Smeenge, Fred H. Heads.
Exhibiting: Complete line of registers, grilles and furnace accessories for warm air heating and air conditioning systems. A register with a turning blade valve, and a ceiling outlet—the newest addition to the line—will be featured. The year 1951 marks the exhibitor's 50th anniversary, and this will be pointed up in the exhibit.

HEATING, PIPING & AIR CONDITIONING, 6 N. Michigan Ave., Chicago 2, Ill.—Booth 12
In attendance: Frank P. Keeney, Chas. E. Price, Wallace J. Osborn, Robert A. Jack, C. M. Burnam, Jr., George C. Cutler, James D. Thomas.
Exhibiting: Heating, Piping & Air Conditioning magazine; market information.

HEATING & VENTILATING, 140 Lafayette St., New York 13, N. Y.—Booth 48
Exhibiting: Publication.

HEAT-TIMER CORP., 520 Broadway, New York 12, N. Y.—Booth 735

HEIL CO., 3600 W. Montana St., Milwaukee 1, Wis.—Booths 93 & 97
In attendance: J. F. Heil, H. F. Pugh, D. E. Fricker, A. F. Meyer, W. E. Simons, George Hochstein, Roy King, Karl Mould, Fred Brubaker, John Barclay, John Ballard, Wm. Chester, Jr., J. F. Heil, Jr.
Exhibiting: Oil fired and gas fired units.

HENRY FURNACE CO.—see C. A. OLSEN MFG. CO.

HERSHEY MACHINE & FOUNDRY CO.—see MOTORSTOKER DIV.

HOFFMAN SPECIALTY CO., 1001 York St., Indianapolis 7, Ind.—Booth 235
In attendance: W. W. Dillon, N. D. Skinner, R. J. McCracken, A. O. Roche, Jr., F. Jehle.
Exhibiting: Venting valves, thermostatic traps, float and thermostatic traps, bucket traps, pressure reducing valves, temperature regulators, water control systems, vacuum and condensation pumps.

HOLLY MFG. CO., 875 S. Arroya Pkwy., Pasadena, Calif.—Booth 835
In attendance: J. Stanley Johnson, Fred C. Farmer.

Exhibiting: Gas fired "Stubby" floor furnaces and "NarrowWall" recessed wall heaters, with secondary heat exchanger (AGA approved).

HOMEASE PRODUCTS CO., 52 Iowa Ave., Paterson 3, N. J.—Booth 628
In attendance: Robert R. Birkins.
Exhibiting: Oil burners.

HOOK & ACKERMAN, INC., 18 E. 41st St., New York 17, N. Y.—Booth 703
In attendance: H. D. Staman, W. F. Hosmer, John F. Baier, H. S. Ackerman.
Exhibiting: "Hydrotherm" gas fired boilers, featuring "Midget" unit for individual apartment heating, with 45,000 Btu input and suitable for suspended installation.

ILG ELECTRIC VENTILATING CO., 2850 N. Crawford Ave., Chicago 41, Ill.—Booth 310

In attendance: C. W. Smith, S. D. Stewart, W. T. Trowbridge, G. A. Innes.
Exhibiting: Built-in "Ilgette" kitchen fan, 10 in. ceiling kitchen fan, 8 in. package kitchen fan, "Ilgedaire" night cooling fan, propeller fan, explosionproof propeller fan, power roof ventilators, centrifugal fans, steam unit heater, electric unit heater, gas unit heater. New power roof ventilator and 8 in. special "New York Life Manhattan House" package kitchen fan will be featured.

ILLINOIS ENGINEERING CO., Racine Ave. & 21st St., Chicago 8, Ill.—Booth 49

In attendance: Robert L. Gifford, Jas. C. Matchett, Gordon L. Harris, J. L. Ehretsmann, R. W. Leutwiler, Louis Huyette, Walter Edge, Phil Wood.
Exhibiting: Glass model of steam trap operating under steam, recording instrument performance of a float and thermostatic trap draining a unit heater under steam; complete control panels and cabinets for control systems; general line of heating specialties for vacuum and vapor systems. New developments in automatic steam and fluid control equipment will be featured.

ILLINOIS TESTING LABORATORIES, INC., 420 N. La Salle St., Chicago 10, Ill.—Booths 624-626

IMPERIAL BRASS MFG. CO., 1200 W. Harrison St., Chicago 7, Ill.—Booths 435-437
In attendance: C. H. Benson, F. McNellis, Jr., E. F. Todd, W. Wagh, T. A. Byrnes.
Exhibiting: Flared, compression, "Hi-Duty" and brass pipe fittings; tube fittings for LP gas; refrigeration flared tube fittings; refrigeration valves; refrigeration driers; shut-off valves; tubing tools; soldering and welding equipment. Improved gear type tube benders, new liquid indicators for refrigeration applications, and new charging lines for refrigeration applications will be featured.

INDEPENDENT REGISTER CO., 3747 E. 93rd St., Cleveland, Ohio—Booth 801

In attendance: K. B. Solberg, A. H. Ullman, B. N. Richardson.
Exhibiting: Registers and grilles for warm air heating, ventilating and air conditioning.

INDUSTRIAL VAN PACKER CORP., 612 First National Bldg., Davenport, Ia.—Booth 248

In attendance: J. M. Hemingway, M. W. Langan, Leo Coleman.
Exhibiting: Industrial chimney "which requires no maintenance and never requires painting, and which features higher combustion efficiency, less smoke, better draft with lower height, and fuel savings."

INGERSOLL PRODUCTS DIV., BORG-WARNER CORP., 760 E. Vine St., Kalamazoo, Mich.—Booths 236-240-244

In attendance: Frank J. Nugent, Howard Limbacher, W. B. Johnson, Paul Fetzek, James Neall, Larry Hodge, G. Huston, Kendall Flint, C. Baker, L. Hershey, R. A. Anderson.
Exhibiting: Gas winter air conditioners, gas conversion burners, oil conversion burners, oil gravity furnaces, oil winter air conditioners, coal winter air conditioners, coal gravity

furnaces, and featuring cutaway model of heavy gage "Wedgetube" heat exchanger and new series of gas fired winter air conditioners.

INGERSOLL-RAND CO., Phillipsburg, N. J.—Booth 931

In attendance: G. H. Gavin, B. P. Gilmore, J. F. Finger, A. L. Keeler, R. J. Dodge, R. E. Allen, W. P. VanEps, Jr., R. S. Johnson, T. E. Bond, W. W. Cramer, J. L. Carpenter, J. M. Wells, S. S. Orben, S. B. Wolfe, Jr.
Exhibiting: Compressors and electric "Impactools," "Motorpump" line for air conditioning and heating applications will be featured.

INSULATING CONCRETE CORP., 3100 K St. N. W., Washington 7, D. C.—Booth 443

INTERNATIONAL HEATER CO., 101 Park Ave., Utica 2, N. Y.—Booth 729

In attendance: I. C. Barber, C. T. Meyer.
Exhibiting: "Oil Economy" oil fired winter air conditioning units, one for utility room and the other for basement installation; "Gas Economy" winter air conditioning unit for utility room or basement installation; boiler-burner unit; gas conversion burner. The gas winter air conditioning unit, the gas conversion burner and the boiler are new products recently added to the line.

IRON CITY CHEMICAL CO., Valencia, Pa.—Booth 441

In attendance: Robert G. Schmidt, George C. Hein, Geza Orley, John P. Galvin.
Exhibiting: "Glycolator" vaporizers which disperse triethylene glycol to kill airborne bacteria. Two new units, both portable, one a small home unit and the other for institutions, will be featured as well units which attach to furnaces and commercial glycol vaporizers for central air conditioning systems.

IRON FIREMAN MFG. CO., 3170 W. 106th St., Cleveland 11, Ohio—Booths 39 & 59

JACKSON & CHURCH CO., 321 N. Hamilton, Saginaw, Mich.—Booth 80

In attendance: D. L. Perrot, L. S. Redford, O. J. Murphy, B. R. Bremer, F. E. Young, F. C. Adams, Howard K. Beck, C. J. Low, R. H. Beeman, Alton Roth.
Exhibiting: "Powerator", "Powerated" and suspended furnaces and heaters, and "4 in 1" unit.

JACOBS & SONS, LIONEL L., 136 W. Wayne Ave., Wayne, Pa.—Booth 130

In attendance: Lionel L. Jacobs, Bruce L. Jacobs, Earl Fountain, Robert Miller.
Exhibiting: "Brandenburg Basepanel" convector radiation, "Pentwater" fuel oil pumps, miscellaneous controls and accessories, and featuring applications of "Basepanel" radiation to housing developments.

JEFFERSON ELECTRIC CO., Bellwood, Ill.—Booth 336

In attendance: C. T. Harnett.
Exhibiting: Oil burner ignition transformers.

JENKINS BROS., 100 Park Ave., New York 17, N. Y.—Booth 30

Exhibiting: Valves; discs; friction and rubber tapes. Bronze rapid action, lever operated gate valve, called "Swingrite"; 500 Brinell plug and seat bronze globe, "for tough services" to 500 lb steam, and bronze globe "suitable for 90 percent of industrial piping" will be featured.

JENN AIR PRODUCTS CO., 333 N. Pennsylvania Ave., Indianapolis 4, Ind.—Booth 421

In attendance: L. J. Jenn.
Exhibiting: Air exhausters, featuring wall type models for use where roof units are not practical or easily installed.

JOHNSON SERVICE CO., 507 E. Michigan St., Milwaukee 2, Wis.—Booths 82-84

In attendance: M. M. Herrick, E. F. Tate, D. S. Plewes, D. B. Whalen, G. A. Lillie, H. E. Kiefer, N. J. McGee, W. W. Hill, E. K. Schultz, Jr.

Exhibiting: Automatic temperature and air conditioning control systems, with equipment shown in actual operation. Small control valves for convectors and unit air conditioners; "Master-Submaster" control for unit ventilators; and "Record-O-Stat" recorder-controller will be featured.

JOY MFG. CO., Henry W. Oliver Bldg., Pittsburgh 22, Pa.—Booth 517

In attendance: R. Mancha, R. A. Heindel, C. L. Tinker, C. W. Miller, C. R. Hiers, J. F. Fitchie.
Exhibiting: Fans.

KAUSTINE CO., INC., Perry, N. Y.—Booth 321

In attendance: J. B. Mollnow, Sr., J. B. Mollnow, Jr., Willard Stahl, Russell Preine.
Exhibiting: Oil fired winter air conditioners.

KEENEY PUBLISHING CO., 6 N. Michigan Ave., Chicago 2, Ill.—Booth 12

In attendance: Frank P. Keeney, Chas. E. Price, Wallace J. Osborn, Robert A. Jack, C. M. Burnam, Jr., George C. Cutler, James D. Thomas, John E. Peterson.
Exhibiting: Heating, Piping & Air Conditioning magazine; American Astusan magazine; market information.

KENT CO., INC., 103 Canal St., Rome, N. Y.—Booth 419

In attendance: J. C. Clifford, George Davis, Joe Hugues, Phil T. Hugues, Paul Young, Sam Ruch.
Exhibiting: Double suction furnace and boiler cleaner.

KEWANEE BOILER CORP., Franklin and "Q" Tracks, Kewanee, Ill.—Space "A"

In attendance: Ben H. Schulze, J. M. Hartman, H. W. McClure, Karl Rugart, T. F. Maher, E. J. Lambrecht, Charles Schuatz, James Kerin, Harry W. Doerrfuss, Curtis H. Wells, Henry Makin, George Gilmout, William J. Robinson, Dayrel G. Hoke.
Exhibiting: Welded boiler for low pressure steam or hot water heating shown as an actual sawed-in-two section of the 8500 sq ft size; "Square-Heat" boiler, representative of a series of eight sizes, for heating medium size buildings and equipped with a domestic hot water coil for storage tank operation; round boiler in new enclosing jacket for heating homes or small buildings; "Cottage" boiler, which is newest addition to exhibitor's residential line and will be shown for the first time at any heating show.

KOVEN & BRO. INC., L. O., 154 Ogden Ave., Jersey City 7, N. J.—Booth 50

In attendance: A. R. Hanson, E. Wodecka.
Exhibiting: "Venko" model for small homes, "Deluxe Waterfilm" for larger homes, and featuring new packaged oil burner unit for smaller homes.

KO-Z-AIRE, INC., 401 Coolbaugh St., Red Oak, Ia.—Booth 825

In attendance: John J. Hildebide, Richard T. Demarest, Edward Lambert, Leonard White, Jack Bennett, Arthur Hicks, George Johnson, Lin Krause, Arthur Nugent, Dan Banner.
Exhibiting: Gas and oil fired counterflow, "Lo-Boy" and "Hi-Boy" winter air conditioners; gravity furnaces; conversion gas burners. New counterflow oil and gas forced air units for perimeter heating and new conversion gas burner with single port burner will be featured.

KRESNO-STAMM MFG. CO. (AMERICA) INC., 345 Commercial Ave., Palisades Park, N. J.—Booth 822

KRITZER RADIANT COILS, INC., 2901 W. Lawrence Ave., Chicago 25, Ill.—Booth 710
In attendance: M. W. Knight, C. G. Newton, C. C. Schedler, R. E. Burke, M. W. Blankin.
Exhibiting: Radiant coils, baseboard radiation,

commercial fin pipe coils, baseboard convectors. Simplicity in installation is the key-note of these products, "comes through having a prefabricated radiant finned tube coil with all necessary accessories for easy installation." The baseboard coil has such features as a built-in hanger attached to the backplate.

LAU BLOWER CO., 2001-2029 Home Ave., Dayton 7, Ohio—Booth 533
In attendance: E. B. Lau, T. I. Byrd, H. W. Faulkender, E. V. Sullivan, J. Burrows, C. Mile, E. Wolford, E. Humphrey, J. Wallace, W. Lohrey.
Exhibiting: Blower wheels, pulleys, pillow blocks, blower housings and assemblies, industrial and commercial exhaust fans, window exhaust fans, portable fans, single inlet direct drive blower assembly, double inlet direct drive blower assembly, and new portable window fan (exhaust or intake) for use in casement windows will be featured.

LESLIE CO., Lyndhurst, N. J.—Booth 32
Exhibiting: Pressure and temperature regulators and controllers for space heating and air conditioning applications. Pressure regulators and controllers capable of one step pressure reductions over a wide range of inlet pressures, welded stainless steel trim and stilled valve seating surfaces, will be featured, as will a new self-contained temperature regulator for hot water service.

LEWIN-MATHES CO., 1111 Chouteau Ave., St. Louis 2, Mo.—Booth 113

LEWIS & CO., INC., JOSEPH E., 1303 Carroll St., Baltimore 30, Md.—Booth 715
In attendance: J. R. McDonald, T. E. Dryden, J. C. Fullerton, Joseph Tobin, H. R. Osterling, Jack Dawson, George Derbyshire, Lou Mack.
Exhibiting: "AquaHeater" tankless water heater.

LIBBEY-OWENS-FORD GLASS CO., Toledo 3, Ohio—Booth 132

LIMA REGISTER CO., 651 N. Baxter St., Lima, Ohio—Booth 348
In attendance: Henry R. Pataky, Ray Boland, Russ Morey, C. J. LeMaster.
Exhibiting: Registers and grilles for warm air heating and air conditioning. New floor diffuser, especially designed for perimeter heating, will be featured.

LINDY HEATERS, 2370 Hoffman St., New York 57, N. Y.—Booth 633
In attendance: Lawton R. Moray, Otto Lindy, August Weiland, Alan Gasner, Louis Friedman.
Exhibiting: Tankless and storage type indirect hot water heaters for external or internal installation in steel or cast iron heating boilers, heat exchangers, flexible union connectors, condensate coolers and preheaters.

LIQUIDDEPTH INDICATORS, INC.—see PETROMETER CORP.

LIQUIDMETER CORP., 41-03 36th St., Long Island City 1, N. Y.—Booth 426
In attendance: W. C. Armstrong, J. J. Cosgrove.
Exhibiting: "Liquidometer" and "Levelometer" gauges for indicating direct and remote tank contents. Dial instruments utilize hydraulic, electric or hydrostatic transmission systems. Direct reading gauges are straight mechanical.

LOCKFORMER CO., 4615 W. Roosevelt Rd., Chicago 50, Ill.—Booth 45
In attendance: George W. Lamberson, Harold G. Flagler, Edward C. Bill, John Davis.
Exhibiting: "Lockformer 220", "Lockformer 224" with power flanging attachment; "Cleat-former".

LYCOMING-SPENCER DIV., AVCO MFG. CORP., 642 Oliver St., Williamsport, Pa.—Booth 148

In attendance: E. I. Boardman, R. S. Brennan, J. C. Ickeringill, J. H. Smith, Jr., H. A. Johnson, D. Reinhardts, D. J. Falk.
Exhibiting: Cast iron and steel heating boilers for residential and low pressure commercial systems.

MAID-O-MIST INC., 3217 N. Pulaski Rd., Chicago 41, Ill.—Booth 648
In attendance: William J. Woolley, O. V. Woolley, H. J. Carr, N. F. Sorgenfrei, William Buntin, Paul Buntin, E. E. Berthel, E. Busch, George Hench, A. Aguer, William Walter, J. McKintee, J. O'Connor, R. Thorne.
Exhibiting: Automatic humidifiers for steam and hot water radiators, warm air turnouts and related items, new air valves for hot water heating systems, new balancing valves for hot water heating systems, water line float control valves, new boiler feeders and cutouts.

MARIETTA METAL PRODUCTS CORP., 540 N. 63rd St., Philadelphia, Pa.—Booth 58
In attendance: John Hancock, Arnold E. Blitz, Paul Commaker, Ralph Richards, Richard Klotz, Joseph Meyers.
Exhibiting: Oil fired boilers; burners; boiler burner units, "Magic Heat" boilers, burners, circulators, etc., will be featured.

MARLEY CO., INC., Fairfax and Marley Rds., Kansas City 13, Kan.—Booth 37
In attendance: L. A. Christensen, J. A. Cameron, Walter L. Clark, Roy W. Maze, F. B. Reed, R. M. Sharp, J. J. Laitman, J. P. Ketcham, K. W. Oakley, H. P. Rodgers, Walter A. Broll, Dale Truscott.
Exhibiting: Scale model of "Double-Flow" cooling tower; "Aquatower" packaged cooling tower; cooling tower mechanical equipment.

MARLO COILING CO., 6135 Manchester, St. Louis 10, Mo.—Booths 3 and 5
In attendance: C. D. Marlo, A. T. Marlo, L. C. Pellegrini, H. R. Iverson, C. Wicks, Richard K. Hunter, Howard Caton, Walter B. Moses, Jr., George E. Roepke.
Exhibiting: Induced draft cooling towers, evaporative condensers, zone type air conditioners, remote type room coolers, blast cooling and heating coils.

MARSH HEATING EQUIPMENT CO., 3501 Howard St., Skokie, Ill.—Booth 444
In attendance: James Emmert, Jr., William M. Ensign, R. E. Barnett, Howard Lavaty, S. C. Kauffman.
Exhibiting: Radiator traps and valves, float and thermostatic traps, vents, heating controls, gages, thermometers, condenser water regulators, solenoid valves.

MCCORD CORP., 2587 E. Grand Blvd., Detroit 11, Mich.—Booths 318-320

MCDONNELL & MILLER, INC., 3500 N. Spaulding Ave., Chicago 18, Ill.—Booth 331
In attendance: E. N. McDonnell, Nils W. Swanson, George La Roi, J. W. Ramsey, Howard Peary, Parker Devlin, John James, Al Behrens, Dick Berry, Russ Evans.
Exhibiting: Safety devices for steam and hot water heating boilers, including boiler water feeders, low water fuel cutoffs, pump controllers, safety relief valves, special float switches, and float valves. New high pressure Brucated safety relief valves for domestic hot water heating systems and new explosion-proof electric controllers will be featured.

MCQUAY, INC., 1600 Broadway, N.E., Minneapolis 13, Minn.—Booths 803-805

MERCOLD CORP., 4201 Belmont Ave., Chicago 41, Ill.—Booth 13
In attendance: Hugh Courtel, J. W. Owens, W. Coulterjohn, R. F. Fisher, W. K. Stauffer, F. W. Ayer, John Sheddin, J. W. Johnson, I. E. McCabe, J. F. McCauley, K. Reiley.
Exhibiting: Complete line of automatic controls for heating, air conditioning, refrigeration and various industrial requirements.

METAL CARRIER CORP., 1750 Alpine Ave., N. W., Grand Rapids 4, Mich.—Booth 316
In attendance: M. C. Weiner, L. Lobdell, L. F. Oberman.
Exhibiting: Heating and air conditioning registers and grilles.

METALS & CONTROLS CORP., SPENCER THERMOSTAT DIV. & GENERAL PLATE DIV., 34 Forest St., Attleboro, Mass.—Booth 514
Exhibiting: "Klixon" controls, including over-heat protectors and starting relays; precious and composite metals.

METROMATIC MFG. CO., 21 Henderson St., Everett 49, Mass.—Booth 139
In attendance: B. W. Cosentino, Wendell Austin, Robert W. Pyne, Albert J. Axman, Frank X. Pyne, Howard Hall, Arthur Seitz, Jr., Joseph Sweeney, Emery Carrier, William MacAdams, Jr.
Exhibiting: "Metropac" forced warm air furnace; "Strate Aire" furnace; oil burners. Economy Model S1 features forced warm air for winter heating and domestic hot water year 'round in a unit 'attractively priced for low cost homes."

MID-CONTINENT METAL PRODUCTS CO., 1960 N. Clybourn Ave., Chicago 14, Ill.—Booth 210
In attendance: A. F. Zitzewitz, C. F. Petersen, E. W. Haedike.
Exhibiting: "Lo-Blast" and "Economite" gas burners of the power type. Exhibit will demonstrate "heating of all sizes and types of buildings, from cottages to skyscrapers."

MILWAUKEE GAS SPECIALTY CO., 730 N. Jackson St., P. O. Box 461, Milwaukee, Wis.—Booth 544

MINNEAPOLIS-HONEYWELL REGULATOR CO., 2733 4th Ave. S., Minneapolis 8, Minn.—Booths 948-950
In attendance: T. McDonald, A. H. Lockrae, J. E. Haines, C. D. Lyford, J. S. Locke, H. D. Bissell, J. A. Young, Kent Wilson, Karl Schick, H. E. Chapter, R. R. Moore, Henry Carlson, T. Reed, V. D. Wissmiller, E. F. Snyder, R. W. Cryder, R. H. Jacobs, J. F. Cumiskey, H. R. Canoyer, L. B. Belford, J. S. MacGann, A. H. Koch, D. J. Petersen, C. C. Cochran.
Exhibiting: Air measuring and recording instruments; water circulators; low water cutoffs; damper regulators; dampers; humidity recorders and indicators; recording and indicating instruments; pyrometers; humidity and temperature recorders; refrigeration controls; registers; thermostats; transformers; valves.

MITCHELL MFG. CO., 2525 N. Clybourn Ave., Chicago 14, Ill.—Booth 57
In attendance: Bernard A. Mitchell, E. A. Tracey, L. H. Solomon, H. G. Haas, John Jennings.
Exhibiting: Room air conditioners of several models. One-third ton window unit will be featured.

MODINE MFG. CO., 1509 DeKoven Ave., Racine, Wis.—Booth 532
In attendance: Harry J. Clark, R. D. Bitzer, W. L. Kerst, A. F. McGovern, O. E. Desmond, W. R. McMahon, M. J. Druse.
Exhibiting: Unit heaters, convectors and coils, and featuring cabinet units for heating or cooling and picture window convectors.

MONARCH MFG. WORKS, INC., 2501 E. Ontario St., Philadelphia 34, Pa.—Booth 900
In attendance: T. W. Murphy, E. B. Frame, J. M. Carroll, R. F. Stone, C. E. Fink.
Exhibiting: Oil burner nozzles and accessories, air conditioning nozzles and strainers. New high efficiency "Combustion Head" under fire will be featured.

MORRISON PRODUCTS, INC., 16816 Waterloo Rd., Cleveland 10, Ohio—Booth 632

MORRISON STEEL PRODUCTS, INC., 601 Amhurst St., Buffalo 7, N. Y.—Booth 23
In attendance: Gene Brown, John K. Farrar, Samuel S. Neide, Herbert G. Miller.
Exhibiting: "Mor-Sun" counterflow forced warm air furnace for perimeter heating, conversion gas burner, basement type "Toaster" model furnace, gravity furnace. The counterflow models for both oil and gas have been

developed to handle the increasingly popular perimeter system of forced warm air heating, "are completely die stamped and mass produced on modern automotive principles."

MORSE-SMITH-MORSE INC., 165 Dexter Ave., Watertown 72, Mass.—Booth 723
In attendance: R. E. Chase, J. C. Dieselman.
Exhibiting: Fusible oil valves, oil filters, thermal switches, tank gages and vent caps.

MOTORSTOKER DIV., HERSHEY MACHINE & FOUNDRY CO., Manheim, Pa.—Booths 147, 150, 432
In attendance: A. T. Bertolotto, J. D. Wentz, H. D. Merrill, R. L. Loomis, J. F. Fisher, F. L. Cassel, C. H. Olandt.
Exhibiting: Coal and oil fired warm air furnaces; boiler units; conversion stokers; conversion oil burners. New package units (coal and oil fired) will be featured.

MUELLER FURNACE CO., L. J., 2005 W. Oklahoma Ave., Milwaukee 15, Wis.—Booths 304-308
In attendance: H. P. Mueller, Sr., H. P. Mueller, Jr., C. N. Hewin, Jr., F. J. Nussli, H. B. Smith, L. N. Zimmerman, Leroy Walker, Chet Gollings, Larry McCann, Ray Cleveland, Edward Vanderhaven, L. C. Stone, Edward O'Connell, Harry Schink, Paul Thompson, Carl Ferris, Tom Halligan, James Edgar, Fred Seiden.
Exhibiting: Gas and oil fired heating and winter air conditioning equipment, including gravity and forced air units, gas boilers, gas unit heaters, gas horizontal furnaces and gas and oil conversion burners. "Type 110" gas fired winter air conditioner, available in white enamel or green crinkle lacquer, making it suitable for utility room or basement installation, designed with all-welded, steel heat exchanger and fired by drilled-port, cast iron burner and available in range of five sizes with Btu inputs of 60,000 to 160,000, will be featured.

MULTI-VENT DIV.—see PYLE-NATIONAL CO.
NASH ENGINEERING CO., South Norwalk, Conn.—Booth 400
NATIONAL RADIATOR CO., 221 Central Ave., Johnstown, Pa.—Booth 133
In attendance: C. M. Baumgardner, L. N. Hunter, B. T. Hain, J. W. LeRoy, P. J. Bracken, P. A. Formel, J. H. Johnston, J. Zidals, F. R. Kriebel, L. M. Lyall, Jr., W. J. McDougal, G. T. Moran, C. A. Piez, M. R. Roberts, M. Taylor, A. J. George, R. S. Doherty, J. W. Hall, H. W. Williams, K. O. Schlenker, C. J. Philage, A. K. Tinker, G. A. Baerenklau, F. W. Eichler, P. J. Gerdon, S. G. Haynes, A. R. Herske, R. A. Schmick.
Exhibiting: 100 and 200 series "National Heat Extractor", residential steel boiler, gas boiler, "Art" radiators, "Aero" and "Art" convectors, "Art" baseboard, unit heaters, "NRC" fin tube convectors, heating accessories. The "National Packet"—an all-in-one automatic home heating unit, providing heat and domestic hot water, with boiler, burner, accessories and controls factory-assembled in a single crate and available with enclosing cabinet or flush jacket; "Art" baseboard, a non-ferrous heating unit for flush with wall (BF) or recessed (BR) installations; and unit heaters for horizontal or downflow (vertical) air delivery, will be featured.

NELSON DIV., HERMAN, AMERICAN AIR FILTER CO., INC., 1824 Third Ave., Moine, Ill.—Booths 902-906
In attendance: Robert W. Nelson, Charles S. Stock, Morris G. Munson, W. N. Murray, Donald Strause, F. T. Carroll, Jr., S. T. Carlton, C. A. Pickett, Robert F. DeLay.
Exhibiting: "Draft Stop" unit ventilator and utility cabinets; convector; horizontal shaft propeller fan type unit heater; vertical shaft propeller fan type unit heater; propeller fan unit blower.

NESBITT, INC., JOHN J., Holmesburg, Philadelphia 36, Pa.—Booth 814
In attendance: John J. Nesbitt, Jr., Albert J. Nesbitt, T. M. Reed, Jr., W. D. Widerman, E. A. Grostas, K. W. Will, H. B. Hedges.
Exhibiting: Schoolhouse unit ventilator integrated with open and closed storage cabinets.

NEW YORK BLOWER CO., 32nd St. & Shields Ave., Chicago 16, Ill.—Booth 540

NIAGARA BLOWER CO., 405 Lexington Ave., New York 17, N. Y.—Booth 910

NIAGARA FURNACE DIV., FOREST CITY FOUNDRIES CO., 2500 W. 27th St., Cleveland 13, Ohio—Booth 77

In attendance: I. E. Seith, R. H. Leisenheimer, Walter Kriemer.
Exhibiting: Warm air furnaces and winter air conditioning units, cast iron and steel; also "Hi-Boys", including new apartment size model.

NIAGARA MACHINE & TOOL WORKS, 637-697 Northland Ave., Buffalo 11, N. Y.—Booth 926

In attendance: L. L. Hock, F. L. Kelsey.
Exhibiting: Squaring shears, rotary shears, bar folder, slip roll former, rotary machines, hand tools. Multi-drive table furnishing drive to miscellaneous crimpers, beadlers, flangers, elbow edgers, etc., will be featured.

NORGE HEAT DIV., BORG-WARNER CORP., 672 E. Woodbridge, Detroit 26, Mich.—Booth 501

In attendance: E. J. Effinger, L. J. Studnick, J. W. Pulkingshorn, H. W. Ford, S. F. Porter, M. A. Straub, H. K. Leussler, W. C. Walter, L. L. Groff, J. M. McNamara, C. S. Davis, Jr.
Exhibiting: Oil fired "Hi-Boy", "Lo-Boy" and horizontal winter air conditioning furnaces; gas fired "Hi-Boy", "Lo-Boy" and horizontal winter air conditioning furnaces; gas and oil fired boilers; gas and oil fired water heaters; oil fired floor furnaces; gas gravity furnaces.

NORMAN PRODUCTS CO., 1150 Chesapeake Ave., Columbus 12, Ohio—Booth 850

In attendance: Edward A. Norman, Jr., D. D. Piper, Russell G. Dawley, C. A. Reichelderfer, D. A. Ruem, G. P. Mandel, W. R. Sundermeyer.
Exhibiting: Conversion burners; "Southerner" horizontal furnace; gas designed furnaces; commercial-industrial burners; forced convection heater; "Twinfuel" burners and furnaces. The forced convection heater will be featured.

OLSEN MFG. CO., C. A., Elyria, Ohio—Booth 70

In attendance: C. A. Olsen, Edward P. Hayes, James Crombie, E. R. Downe, C. L. Grandstaff, E. J. Marrel, Jr., J. P. Cullin.
Exhibiting: Warm air furnaces and winter air conditioning units for oil, gas and coal.

OWENS-CORNING FIBERGLAS CORP., Nicholas Bldg., Toledo, Ohio—Booths 206-208

In attendance: C. L. Rowley, R. E. Trumbull, F. B. Grazer, D. M. Browne, W. B. Thomas, P. B. Dias, J. R. King, E. E. Morris, M. H. Owen.
Exhibiting: Filters; coated and flexible type duct insulation; thermal and acoustical insulation for warm air furnaces and air conditioning units. New lightweight and easily erected filter holding frames and foil-faced insulation for use in warm air furnaces will be featured.

PACIFIC STEEL BOILER DIV., UNITED STATES RADIATOR CORP., 300 Buhl Bldg., Detroit 26, Mich.—Booth 909

In attendance: E. J. Grady, H. B. Stegall and managers and personnel of the New York and Philadelphia sales offices.
Exhibiting: Boiler with jacket, plate flue boiler, round boiler, animated display of split fire-boiler.

PATTEN CO., J. V., Sycamore, Ill.—Booth 608

In attendance: Don C. Patten, John H. Patten, A. A. Boyle, Shepard Herman, C. W. Porter, Bernard Zwerling, Alfred Chaplin, Seymour Zwerling.
Exhibiting: "Sun Fuel-Master Heatrap"—a newly designed low cost furnace utilizing primary surfaces to the greatest possible extent.

PATTERSON KELLEY CO., INC., Burson St., East Stroudsburg, Pa.—Booth 525

In attendance: F. L. Patterson, Jr., A. B. Grotz, O. J. Pedersen, William Wilson, C. E. Drake, Leonard F. Lowe.

Exhibiting: Two-circuit dry expansion type "Freon" cooler; heat exchangers and converters; "Freon" condenser of fin tube construction.

PENN ELECTRIC SWITCH CO., Goshen, Ind.—Booth 433

In attendance: Carlos Morgan, A. L. Rubel, George Sander, R. V. Clark, E. B. Maire, R. S. Penn, F. X. Essler, J. E. Corbett, W. S. Lousie, M. E. Henning, James Motavac, A. W. Barr, K. W. Cash, R. H. Luscombe, R. L. Persons, H. C. Shilling, E. A. Price.
Exhibiting: Heating and cooling room thermostats, humidistats, day-night "Tem-Clock" hot water and warm air temperature controls, steam pressure controls, relays and relay transformers, oil burner stack switches, stoker timers, damper motors, refrigeration temperature and pressure controls, water valves and solenoid valves, gas heating controls. Type 442 hot water immersion control with liquid expansion temperature elements providing close temperature control for hot water heating systems will be featured.

PENNSYLVANIA FURNACE & IRON CO., 316 Pine St., Warren, Pa.—Booth 204

In attendance: R. L. Blodgett, C. S. Andersen, H. J. Harvey.
Exhibiting: Gas fired winter air conditioning furnaces, gas fired gravity furnaces, gas conversion burner, gas fired steam vapor and water boilers.

PENTWATER MACHINERY CO., Pentwater, Mich.—Booth 221

% PROPORTEENERS, INC., 345 Harris Ave., Providence 1, R. I.—Booth 55

PERFECTION STOVE CO., 7609 Platt Ave., Cleveland 4, Ohio—Booth 200

In attendance: E. B. Goodwin, S. C. Reese, R. A. Wall, William R. Wright, Jr., Roy Brigrance, W. M. Russell, William Potter, Harold Dean.

Exhibiting: "Superflex" suspended oil furnace, gravity gas furnace, Model 66 "Homogeneous" gas furnaces, "Hi-Boy" oil furnace; oil conversion burner; electric water heater; storage type oil burning water heater. Three-stage conversion gas burner for oil furnaces fired with solid fuels and 80,000 Btu gas floor furnace will be featured.

PERFEX CORP., 300 W. Oklahoma Ave., Milwaukee 7, Wis.—Booths 707-709

In attendance: C. E. Lewis, V. P. Black, V. R. Tate, Allen Butler, J. W. McGuire, D. DeVos, R. Blackhall, P. F. Neess, R. E. Toelner, H. D. Cook, E. Spall, M. Bowman, J. J. Holzhauer, W. A. Matheson, Jr.
Exhibiting: Automatic temperature controls for all fuels and for all types of heating.

PETROMETER CORP., 1 Star Sq., Long Island City 1, N. Y.—Booth 548

In attendance: Dan Bierman, Arthur Bierman, Norbert Milair, Joseph Jawett.
Exhibiting: Tank gages, industrial "Liquidepth" indicators, and cleanout valves.

PITTSBURGH CORNING CORP., 307 Fourth Ave., Pittsburgh 22, Pa.—Booth 347

In attendance: Robert F. Quinn, V. Sanders, J. W. Brennan, A. C. Keltner.
Exhibiting: "PC" glass blocks and "Foamglas" insulation.

PITZ FOUNDRY, INC.—see AMERICAN HYDROVAC

PLUMBING & HEATING BUSINESS, Grand Central Terminal Bldg., New York 17, N. Y.—Booth 53

Exhibiting: Publication.

POWERS REGULATOR CO., 2720 Greenview Ave., Chicago 14, Ill.—Booth 832

In attendance: J. W. Powers, F. A. Murray, K. M. Stevens, E. R. Bowman, C. A. Gustafson, A. J. Keating, H. W. Fea, E. W. Rietz, D. A. MacWatt, E. K. Wagner, H. L. Lundvall, A. H. Morawick, E. J. Peterson, W. Roberts, T. W. Martin, W. H. Slater, M. Weninger, R. DeWallace, E. Mariner, G. E. Fickett, G. M. Cox, C. C. Flaherty, M. W. Jones, H. F. Hutchins, W. I. Collier, I. H. Dale.
Exhibiting: Pneumatic thermostats, valves, damper motors, switches, recording and indicating regulators, thermostatic water mixing equipment, heat exchanger controls, unit ventilator controls, "Flowrite" valves, "Meta-flow" valves, "Accritem" regulator, "No-

Pak" radiator valves, "Powerstroke" damper motor, and remote bulb summer-winter thermostats will be featured.

PREFERRED UTILITIES MFG. CORP., 1860 Broadway, New York 23, N. Y.—Booth 947
In attendance: R. S. Bohn, G. W. Bohn, W. H. Bohn, J. S. Kaplan, B. K. Breed, E. L. Webster.

Exhibiting: Commercial and industrial oil burners and gas burners and accessories, and featuring new combination gas-oil conversion burner.

PRITCHARD & CO., J. F., 908 Grand Ave., Kansas City, Mo.—Booth 25

PUTT, ALLEN A., 120 Cedar St., New York 6, N. Y.—Booth 221

PYLE-NATIONAL CO., MULTI-VENT DIV., 1334 N. Kostner Ave., Chicago 51, Ill.—Booth 15

In attendance: D. I. Packard, G. K. Raider, W. M. Nesteruk, Robert Arnold, Ralph B. Dume, M. M. Connell.
Exhibiting: "Multi-Vent" ceiling panels for uniform low velocity air diffusion, featuring new modular 1 ft panels (in comparison with a conventional form of air injection).

QUIET HEET MFG. CORP., 135 N. J. R. Ave., Newark 5, N. J.—Booth 706

In attendance: S. L. Peters, Oscar Mann, H. M. Spitzer.
Exhibiting: Conversion oil burner, window type room air conditioner, sump pumps, and featuring conversion gas burner.

RCS TOOL SALES CORP., 25 N. Ottawa St., Joliet, Ill.—Booth 833

In attendance: F. S. Russell, T. M. Sweeney, Dale D. Davis, C. R. Longanecker, E. R. Meyers.
Exhibiting: "Super-Saw" portable, all purpose, roughing-in power saw. New fast method of roughing-in electrical, heating, plumbing, maintenance and repair work will be shown.

RADIANT UTILITIES CORP., 8817-18th Ave., Brooklyn 14, N. Y.—Booth 427

In attendance: Jacob G. Goldberg, Julius S. Goldberg, Arthur A. Marcus, Joseph Bloom.
Exhibiting: "Radiant" oil burners, featuring new models designed with the shell combustion head, which is produced in five models from 1/2 to 10 gal.

RADIATOR VALVE CO. OF AMERICA, 428 S. 52nd St., Philadelphia 43, Pa.—Booth 24

In attendance: Nathan Feldstein, J. Christian Myers, Jr., Robert Mott.
Exhibiting: Induced vacuum valves for radiators (steam and vapor), end line vents (induced vacuum type), compensator (attaches above boiler and produces a pumplike action in forcing heated vapor from boiler to radiators), automatic air eliminating valves for hot water radiators and systems.

RANDALL GRAPHITE BEARINGS, INC., 207 E. Market St., Lima, Ohio—Booth 34

In attendance: Alan Dale, K. W. Strunk, George Zapp, E. C. Smith.
Exhibiting: Self aligning, self lubricating, and deep well type pillow blocks, safety collars, bronze bushings, graphited bronze bushings, "Deep Well" oil reservoir in conjunction with self lubricating features in both graphited bushings, ball assemblies and complete pillow blocks will be featured.

READY-POWER CO., 11231 Freud Ave., Detroit 14, Mich.—Booth 731

In attendance: W. S. Jewell, Robert Marsh, William Wendt, W. T. Gilbert.
Exhibiting: Engine refrigeration units—15, 25 and 35 tons—for air conditioning. Latest 1951 models will be exhibited featuring "many new improvements."

REDMOND CO., INC., Owosso, Mich.—Booth 634

In attendance: J. W. Tweedy, G. Baumhardt, R. T. Abrell, G. Calkins, Harvey Wilcox, John Witmer, Mike Koenig, W. R. Fox, Paul Schwarz.

Exhibiting: Fractional horsepower electric motors and motor blower units.

REINHARD BROTHERS CO. INC., 11-17 S. 9th St., Minneapolis 2, Minn.—Booth 445

In attendance: Lawrence V. La Clare.
Exhibiting: Domestic and industrial gas conversion burners.

REMINGTON CORP., Willey St., Auburn, N. Y.—Booth 726

In attendance: E. A. Bonneville, W. H. Peters, E. M. Johnson.
Exhibiting: Complete line of room air conditioners, including window units and console units for 115 and 230 volt ac and dc single phase or three phase.

RESEARCH PRODUCTS CORP., 1015 E. Washington Ave., Madison 10, Wis.—Booth 202

In attendance: A. W. Brown, J. G. Schutz, C. B. Rowe.
Exhibiting: "R-P" air filters, both washable and replacement types, grease filters, "Coolpad".

RHEEM MFG. CO., 570 Lexington Ave., New York 22, N. Y.—Booth 521

RICHMOND RADIATOR CO., 19 E. 47th St., New York 17, N. Y.—Booths 625-631

In attendance: C. W. Farrar, J. Sargeant, N. Rowen, W. Davis, G. Day, E. B. Hauf, E. Reichert, G. Cheasley, E. Selig.
Exhibiting: Gas fired furnaces, gas fired boilers and oil fired furnaces. New oil fired steel winter air conditioner will be featured.

RIC-WIL CO., 1052 Union Commerce Bldg., Cleveland 14, Ohio—Booths 207-209

In attendance: C. W. Wheeler, W. S. McLeish, H. W. Runkly, Oliver Johnson, W. L. Bartel, E. S. Pandey, S. Trausa, J. Rowe, A. Cobb, W. F. Wood, K. Ryan, S. Bajackson.
Exhibiting: Insulated piping for underground and overhead distribution of steam, hot water, oil and process liquids; "Hel-Cor" units with new baked-on phenolic resin coating for maximum resistance to corrosion; prefabricated housings for expansion joints for protecting and insulating packless type expansion joints, eliminating manholes and periodic maintenance. With illustrations, cross sections and full-size samples of insulated piping, its application for heating, cooling or power piping—industrial, commercial or residential—will be emphasized.

RIDGE TOOL CO., 400 Clark St., Elyria, Ohio—Booths 333-335

In attendance: W. L. Parcell, R. D. Fye, George Joseph, Frank Zakary, C. O. Hollen.
Exhibiting: Pipe wrenches, pipe cutters, pipe vices, pipe reamers, pipe threaders, compound leverage wrenches, power drivers, bolt dies and pipe machines. New pipe and bolt threading machine will be featured.

RITTLING CORP., 1202 Rand Bldg., Buffalo 11, N. Y.—Booth 747

ROBERTS-GORDON APPLIANCE CORP., 44 Center Ave., Buffalo 6, N. Y.—Booths 407-409

In attendance: W. S. Gordon, Jr., L. C. Smyth, R. L. Warneke, W. E. Davis, R. T. Huys.
Exhibiting: Conversion burners, gas-gas and gas-oil dual fuel burners, "Nordensson" industrial burners, winter air conditioning, unit heaters. Special attention will be called to the gas-gas dual-fuel burner. These conversion burners can be converted to use natural, manufactured or mixed gas with LP gas standby.

ROBERTSHAW-FULTON CONTROLS CO., FULTON SYLPHON DIV., Knoxville 4, Tenn.—Booths 429-431

ROME-TURNEY RADIATOR CO., Canal St., Rome, N. Y.—Booths 616-618

In attendance: William L. Lynch, John J. Boylan, Edwin J. Parry, E. L. A. Forster, Joseph M. Shannon, Francis J. Larkin, Thomas Murphy.
Exhibiting: "Rocep" convactor radiators, blast air heating coils, blast air cooling coils, extended surface finned tubing, and featuring baseboard radiation.

ROSS HEATER & MFG. CORP., INC., West & Forest Aves., Buffalo 13, N. Y.—Space B

RUSSELL CO., F. C., 1100 Chester Ave., Cleveland 1, Ohio—Booth 848

In attendance: Drew N. Martin, E. T. Campbell.
Exhibiting: "Rusco" all metal combination self-storing screen and storm sash; all metal prime windows; all metal combination screen and storm doors.

SARCO CO., INC., 350 Fifth Ave., New York 1, N. Y.—Booth 38

In attendance: H. F. Collins, R. C. Cumming, M. J. Marion, F. C. Perkins.
Exhibiting: Steam traps (thermostatic, bucket, float and expansion types); "Sarcotherm" weather controls for hot water heating; radiator valves, traps and balancing fittings for steam and hot water systems; temperature regulators; water blenders, air eliminators for steam and water; boiler return traps, lift fittings; pipe line strainers. Weather compensating control for steam heating systems, float traps with new thermodynamic air bypass, and "Sarcostat" two position hydraulic motorized valve will be featured.

SERVEL, INC., 119 N. Morton Ave., Evansville 20, Ind.—Booth 602

In attendance: H. C. Pierce, C. A. Rickner, J. J. McCormick, W. S. McEwen.
Exhibiting: Gas-operated "All-Year" air conditioner (3 tons cooling and 96,000 Btu heating capacity); steam operated packaged type air conditioner (5 tons cooling and 87,000 Btu heating capacity); and cooling tower for use with 3 ton air conditioners. This will be the first public showing of the 20 ton Model DUT absorption refrigeration unit, which will operate with steam from any source and will deliver its refrigeration tonnage in the form of chilled water piped to external heat exchange surfaces for air cooling effect.

SHEFFLER-GROSS CO., 1000 Drexel Bldg., Philadelphia 6, Pa.—Booth 426

In attendance: M. Sheffler, Samuel Gross, Thomas J. Kenny, G. K. Fisher, J. H. Wilkerson, Arthur T. Lawley, George C. Halwas, J. B. Butler, C. C. Bieber, Carl Hafer, W. J. Doyle, R. R. Paget, Harry Updegrave, J. Gallen.

Exhibiting: Space will be used as a reception booth to tie in with two of exhibitor's principals: the Liquidometer Corp. and the Fulton-Sylphon Div. of Robertshaw-Fulton Controls Co. Exhibit will "spotlight" new McAlair externally pilot operated pressure reducing valve.

SIEMON & CO., 1819 Holmes St., Kansas City 8, Mo.—Booth 109

In attendance: Richard H. Siemon, Charles D. Jones, John P. Johns, John Douglass.
Exhibiting: Industrial gas burners and conversion burners. New "Combi-Matic" gas-oil burner, operating with pressure type oil burner and needing no combustion chamber, will be featured.

SILENT-FLAME MFG. CO., INC., 807 Zerega Ave., Bronx 61, N. Y.—Booth 818

In attendance: John M. Sibarum, William Singer, Charles Fuchs, Jack Raskin, Murry Walshin, Paul Walshin, Martin Walshin.
Exhibiting: Oil burners, sump pumps, and 10,000 volt transformer.

SKUTTLE MFG. CO., 4099 Beaufait Ave., Detroit 7, Mich.—Booth 346

SMITH CORP., A. O., P. O. Box 584, Milwaukee 1, Wis.—Booths 741-745

In attendance: J. W. Long, Donald Williams, Walter Stake, R. J. Shepard, C. W. Johnson, J. F. Donnelly, H. N. Johnson.
Exhibiting: "Burkay" volume water heaters and home heating boilers and "Permaglas" domestic water heaters.

SMITH CO., INC., H. B., 57 Main St., Westfield, Mass.—Booth 117

In attendance: S. K. Smith, J. E. Reed, Leo Sudhaus, Trevor Jackson, William Todd, Harry Walther, Guy Smith.
Exhibiting: "Milk" cast iron sectional, header type, water tube boiler; "No. 1100" boiler-burner unit; and featuring "No. 2000" boiler-burner unit.

SOUTHWEST MFG. CO., P. O. Box 28, Aurora, Mo.—Booth 439
In attendance: B. J. Hart, F. P. Munsinger, M. S. Nicholson, William J. Blackwell, Carl H. Dean.
Exhibiting: "Heatwave" floor furnaces.

SPARKLER MFG. CO., Mundelein, Ill.—Booth 820
In attendance: A. C. Kracklauer, F. W. Leuthesser.
Exhibiting: Fuel oil filters for oil burners and for space heaters and hot water heaters.

SPENCER HEATER—see LYCOMING-SPENCER DIV.

SPENCER THERMOSTAT DIV.—see METALS & CONTROLS CORP.

STANDARD STAMPING & PERFORATING CO., 3131-3165 W. 49th Pl., Chicago 32, Ill.—Booth 417
In attendance: Lloyd Stone, William Ramquist.
Exhibiting: Registers and grilles.

STEEL PRODUCTS ENGINEERING CO., COMBUSTIONEER DIV., 1205 W. Columbia St., Springfield, Ohio—Booth 125
Exhibiting: Oil burners, gas burners, oil furnaces, gas furnaces, all-fuel burners, stokers, humidifiers, and featuring conversion gas burners and low pressure oil burners.

STEWART MFG. CO., INC., Grove Ave., Cedar Grove, N. J.—Booth 302
In attendance: Fred J. Stewart, R. Douglas Anderson, J. M. Kelo.
Exhibiting: Grilles and registers.

STUTEVANT DIV.—see WESTINGHOUSE ELECTRIC CORP.

SUNDSTRAND ENGINEERING CO., 1325 Seventh St., Rockford, Ill.—Booth 644
Exhibiting: Domestic pressure-type burners.

SUNDSTRAND MACHINE TOOL CO., 2421 Eleventh St., Rockford, Ill.—Booths 423-425
In attendance: B. F. Olson, L. H. Schutte, C. W. Lang, R. L. Douglas, O. E. Mayfield, J. F. Griffey, R. E. Stevens, R. J. Murphy, C. L. Sadler, B. L. Soderberg.
Exhibiting: Fuel units for oil burners, featuring models with and without solenoid.

SURFACE COMBUSTION CORP., 2375 Dorr St., Toledo 1, Ohio—Booths 901-905
In attendance: F. H. Adams, C. B. Phillips, R. A. Bell, H. C. Gurney, W. J. Grover, C. C. Owen, R. E. Hollinshead.
Exhibiting: "Janitrol" domestic-commercial gas-fired space heating equipment, including winter air conditioner, gravity furnace, unit heaters, "Triple Service" boilers, cast iron boilers, floor furnace, conversion burners. The gas-fired conversion burners incorporate such exclusive features as the "Turbo-Flame" diffuser, "Electro-fyre" sparkplug type pilot igniter, "Glo-fyre" burner-flame type of pilot igniter, and "Unit-Thrift" combination electric gas valve and pressure regulator. Stress will be put on the "Janitrol" cooperative dealer merchandising program.

SYNCROMATIC CORP., 1141 Tenth St., Watertown, Wis.—Booth 51
In attendance: R. C. Jaye, H. M. Stillman, George Day, George House.
Exhibiting: Steel oil fired forced warm air furnaces (high boy and basement type); steel gas fired forced warm air furnaces (high boy and basement type); steel hand fired coal deluxe forced air furnace; high capacity oil fired furnace. Exhibit will feature new high capacity furnace for industrial heating with gas or oil.

TACO HEATERS INC., 137 South St., Providence 3, R. I.—Booth 614
In attendance: J. Balter, J. R. Murphy, E. T. Haulihan, H. Lucas, W. Klein, W. Sliney, R. Chaffee, R. Angewine, H. Lisowski.

Exhibiting: Circulators (pumps), water heaters, tempering valves, automatic hot water air valves, relief and reducing valves, venturi fittings, "Flocheks", "Flo-Vet", "Paneltrol" and "Taco-Matic" valve.

TAL BENDER, INC., 417 N. Water St., Milwaukee 2, Wis.—Booth 67
In attendance: E. T. Tal, W. R. Parker.
Exhibiting: Pipe and tube bending equipment. Bending formers made of special aluminum alloys will be featured.

TANN CORP.—see CONGRESS DRIVES DIV.

TANNER-HALL, INC., 252 N. 11th St., Philadelphia 7, Pa.—Booth 239
In attendance: Edward R. Tanner, Richard I. Tanner, James T. Hall, Jr., Raymond C. Tanner, Lawrence I. Tanner.
Exhibiting: United States Air Conditioning Corp. packaged a/c conditioning.

TEMCO, INC., 4104 Park Ave., Nashville 9, Tenn.—Booths 737-739
In attendance: L. E. Nordholt, Frank Drake, Howard Bourner, P. W. Cullom, George R. Darce, Boyd Toner.
Exhibiting: Gas fired wall heaters, conversion burners, floor furnaces, vented heaters, forced air heaters. The conversion burners and wall heaters will be featured.

THATCHER FURNACE CO., Center St., Garwood, N. J.—Booth 201
In attendance: C. Sahler, R. Cook, M. Beard, D. Turner, B. Smith, J. Sheehan, J. Ahearn, J. Leeson, E. Short, D. Buckley, R. Evers, J. Keele, J. Price.
Exhibiting: Oil fired "Comfortmaster"; oil fired winter air conditioner; oil fired "Hi-Boy" winter air conditioner; oil fired counterflow "Hi-Boy" winter air conditioner; gas fired "Comfortmaster"; gas fired winter air conditioner; gas fired gravity warm air furnace; coal fired winter air conditioner; "Thermaster" coal fired gravity furnace; "Oilmaster" oil fired boiler; conversion oil burner. New oil fired counterflow winter air conditioner and gas fired gravity warm air furnace will be featured.

THRUSH & CO., H. A., Peru, Ind.—Booth 94
In attendance: George H. Fox, E. D. Noland, G. O. Johnson, L. D. Grose, W. J. Johnson, R. E. Clegg, T. E. Ealy.
Exhibiting: Complete line of hot water heating specialties, including circulators, flow control valves, low and high pressure relief valves, high pressure reducing valves, heaters and electrical controls, as well as complete line of cast iron or bronze one pipe supply tees, adjustable and nonadjustable. Vertical type flow control valve with both iron and bronze outlet connections, with and without air vent tube, and horizontal circulator with exclusive motor mounting features will be given special attention.

TILO ROOFING CO., INC.—see GLASFLOSS DIV.

TITO MFG. CORP., 113 E. 8th St., Waterloo, Ia.—Booth 234
In attendance: Donald L. Titus, Bob Wirth, Mrs. J. D. Davis, I. M. Golan, Jack L. Canady.
Exhibiting: Grilles, registers, volume controller, and frames. A combination grille giving two way deflection plus a volume controller on the back side, enabling the job to be balanced without removing the grille from the wall, will be featured.

TRANE CO., LaCrosse, Wis.—Booths 250-250-450-650-750
In attendance: D. C. Minard, W. T. Hancock, E. A. Cline, R. E. Lee, R. G. Lubinsky, M. L. Hoglund, Lee Gatewood, A. C. Menke, L. R. Fuller, H. J. Waggle, G. E. Hicke, C. R. Conner, R. E. Hopkins, E. T. Neubauer, R. L. Bernhard, J. L. Bartlett, R. C. Rooks, F. Sontag, R. A. Matheis, K. E. Sontag, C. H. Lindner, J. J. Kittrege, R. S.

Knowles, B. M. Menden, G. C. Breitenbach, P. A. MacArdle, R. K. Leilich, J. J. Whalen, J. J. Wessmiller, P. C. Hutchins, John Spencer, A. E. Halvordson, W. F. Ridout, D. Chytalo, J. Obrigg, D. C. O'Keefe, R. D. Gotwals, H. L. Whitmoyer, W. Cowart, E. C. Liebrecht, J. P. Sheehan, J. W. Sutch, W. L. Colours, J. W. Loser, J. J. Callahan, R. W. Christie, J. H. Baker, T. C. Moore, G. M. Robertson, E. S. White, Cecil Rockey, G. H. Van Steenberg, D. H. Neviater, F. W. Taylor, R. L. Hoddinott.

Exhibiting: New "Centravac" hermetic centrifugal compressor and water chiller for 45 to 150 ton refrigeration range; new line of reciprocating compressors for 50 to 150 ton refrigeration range; completely redesigned and re-engineered series of self-contained air conditioning units; compact, streamlined, multiple-zone "Climate Changer" air conditioning unit; new gas fired duct heater; centrifugal fans; new lower cone and lower fin diffusers for unit heaters; new, heavy-duty line of projection type vertical discharge unit heaters for industrial heating uses and commercial buildings; new gas fired unit heaters employing lower fin diffuser; classroom shelving that matches unit ventilators for schools; new line of evaporative condensers; new line of water circulators; new lines of bucket traps and thermostatic traps. The exhibit will be a 173 ft long panorama of products, many of them in operation, lining most of the south wall of the exhibit hall.

TRIAD PRODUCTS CORP., 5121 N. Clark St., Chicago 40, Ill.—Booth 647
In attendance: Russell L. Geaslen, C. E. Tomlin, Charlie Pratt.
Exhibiting: Boilers, baseboard radiation, radiant panels, conversion gas burners, and featuring horizontal gas and oil fired packaged heating boilers.

TRION, INC., 1000 Island Ave., McKees Rocks, Pa.—Booth 98
In attendance: P. W. Aikenhead, J. W. Frazer, C. F. Landgraf, R. W. McGuire, E. W. Meyers, W. R. Murdoch.
Exhibiting: Electric air filters, and equipment for electrostatic cleaning and purifying of air or other gases. Four standard packaged units for residential and small commercial installations; custombuilt "packaged" units to 10,000 cfm; and built-up units to handle any capacity will be featured.

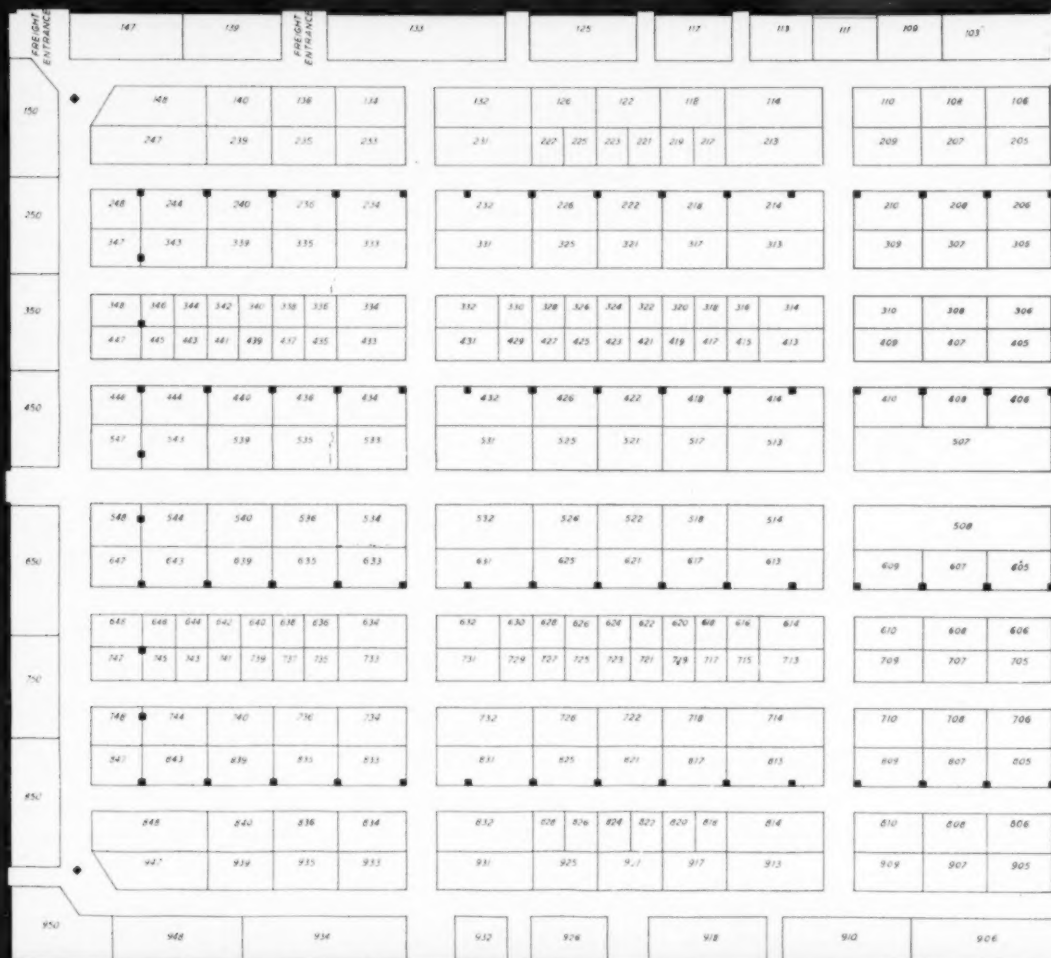
TURB-O-TUBE FURNACE INC., 106 Kingsley St., Buffalo, N. Y.—Booth 935
In attendance: J. B. W. Carmichael, Alex. H. Dann.
Exhibiting: Gas and oil fired furnaces.

TUTTLE & BAILEY, INC., Corbin Ave., New Britain, Conn.—Booth 613
In attendance: Stanley Hart, J. H. Smart, L. Zavorski, L. B. Wilson, R. D. Tutt, P. F. Conway, A. E. Wood, C. E. Daily, J. F. Scouler, J. W. Taggart, H. H. Mather.
Exhibiting: Ceiling diffusers, grilles, registers and air control devices for air conditioning, heating and ventilating; standardized copper convectors for steam and hot water installations.

XXTH CENTURY HEATING & VENTILATING CO., 96 Ira Ave., Akron 1, Ohio—Booth 217
In attendance: J. Garver Kerch, Royal K. Long, Edward F. McGann, C. E. Tomlin.
Exhibiting: Gas and oil fired warm air furnaces.

TYPHOON AIR CONDITIONING CO., INC., 794 Union St., Brooklyn 15, N. Y.—Booth 1
In attendance: James F. Daisey, Edward L. Garfield, Don V. Petrone, Don J. Daisey, Scott J. Hoehn, A. E. Weber, Edward Beck, Seymour Jarcho, Larry D. Spence.
Exhibiting: 3 ton packaged air conditioning unit, console model; 5, 8, 10 and 20 ton packaged air conditioning units; 10 and 20 ton evaporative condensers. Considerable emphasis will be placed on exhibitor's recent development of 10, 15 and 20 ton packaged units for free-standing applications, which are especially adaptable to supermarkets and large theaters.

U. S. MACHINE CORP., 320 North C St., Lebanon, Ind.—Booth 10



Booth Layout for Exposition at Commercial Museum, Philadelphia

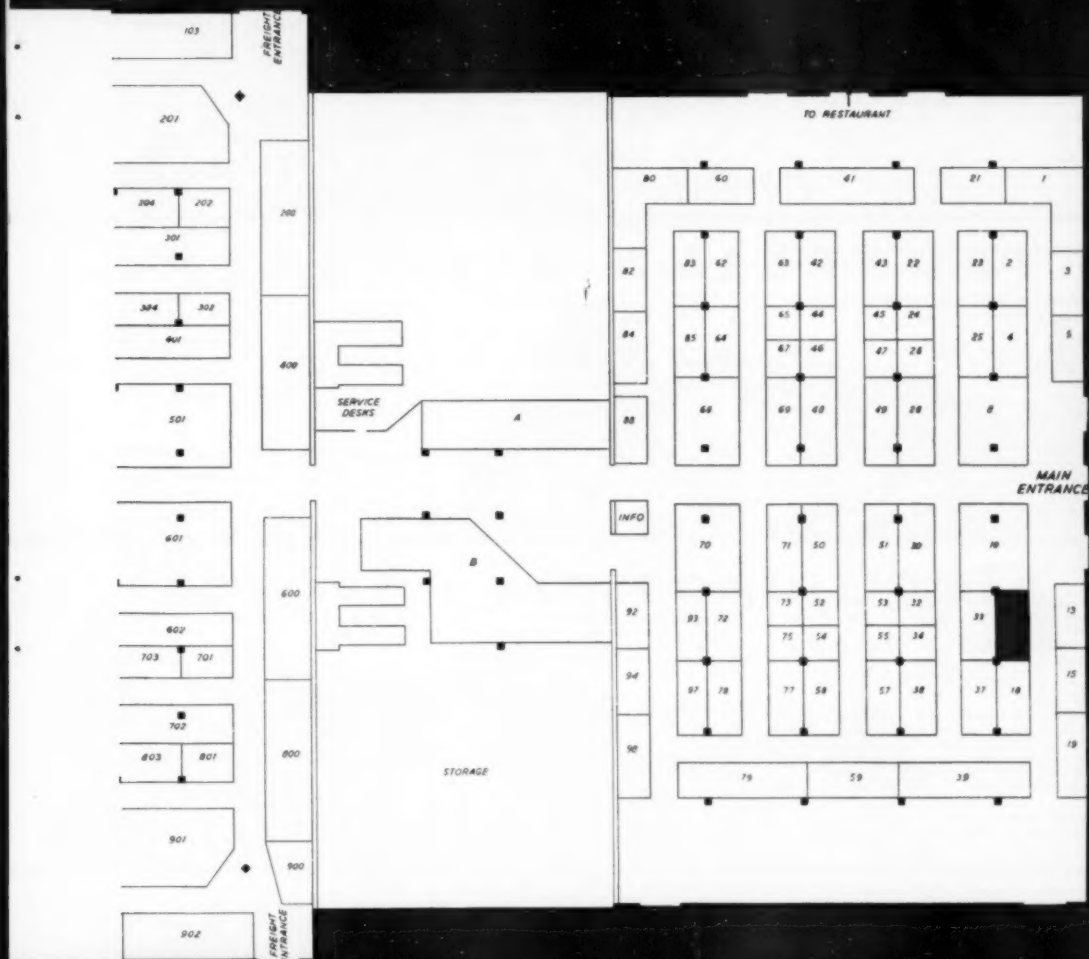
In attendance: Herman E. Winkler, Claude A. Potts, Walter E. Blake, Philip C. Kosch.
Exhibiting: "Winkler" low and high pressure oil burners; rotary cup heavy oil burner; oil fired furnaces; wall furnaces for oil and gas; and featuring new boiler-burner unit.

UNITED STATES AIR CONDITIONING CORP., Como Ave. S. E. at 33rd St., Minneapolis 14, Minn.—Booths 118, 239 & 824

In attendance: A. A. Feinberg, L. P. Hanson, D. E. Feinberg, William Moisselle, M. A. Stuart, H. J. Schorle, A. J. Rocklitz, L. R. Gordon, H. D. Galson, B. E. Leventhal, D. Milligan.

Exhibiting: Booth 118 — General air conditioning equipment display, including two "usAIR-co Modu-air" units, individual room heating and cooling units for multi-room buildings which permit individual room weather con-

trol; blower type unit heater for all types of commercial and industrial heating requirements, displayed with complete accessory group including face and bypass dampers, filter section, mixing chamber and air distribution cowls; housed ventilating set for use indoors or outside with universal discharge to make it adaptable to every application, and featuring new "Vari-Flo" control



**For further information, you are invited to inquire at the
Keeney Publishing Co.—publisher of Heating, Piping & Air
Conditioning and American Artisan—exhibit in Booth No. 12**

of air volume plus a number of other design features.

Booth 239—Refrigeration products display, including two store conditioners, new 2 ton unit as well as 5 ton unit, introducing expanded line of store conditioners available in 2, 3, 5, 7-1/2 and 10 ton models: "Refrigerated Kooler-size", complete, ready-to-run "central plant" air conditioning unit avail-

able in capacities from 3 to 40 tons — a balanced assembly of the components of an air conditioning system ready for installation and operation and featuring built-in evaporative condenser, window model room air conditioner for homes and offices available in 1/2 and 3/4 ton capacities.

Booth 824—Gas fired unit heater display, including propeller fan type with steel heat

exchangers, blower type with steel heat exchangers and duct heater with cast iron heat exchangers.

UNITED STATES RADIATOR CORP., 300 Buhl Bldg., Detroit 26, Mich.—Booth 110
In attendance: A. F. Westerfield, J. R. Knox, M. L. Judd and managers and personnel of the New York, Philadelphia, Harrison, Baltimore and Washington branches.

Exhibiting: New family of "U.S." boilers, horizontal furnace, radiant baseboard. Gas boiler, all fuels boiler, and horizontal warm air furnace will be featured.
Also see Pacific Steel Boiler Div.

UNITED STATES REGISTER CO., 344 E. Burnham St., Battle Creek, Mich.—Booth 734
In attendance: Charles J. Pearson, Harry G. Holliman, A. A. Stagg, E. P. Kromdyk.
Exhibiting: Gravity and air conditioning registers, faces, etc.; vents and grilles; back pressure and exhaust fan dampers. Air conditioning with wall baseboard registers and round ceiling outlets will be featured.

UNITED STATES STEEL CO., 436 Seventh Ave., Pittsburgh 30, Pa.—Booths 740 & 839

UNITED STATES STEEL EXPORT CO., Chicago, Ill.—Booths 740 & 839

UNITED STATES STEEL SUPPLY CO., Chicago, Ill.—Booths 740 & 839

V. & E. PRODUCTS INC., Schuylkill Haven, Pa.—Booth 136
In attendance: J. H. Fubanks, Lionel L. Jacobs, Bruce L. Jacobs, Walter Moriarty.
Exhibiting: Steel water tube boilers, steel "Wall-flame" boilers, traveling grate stoker units.

VIBRATION ELIMINATOR CO., 10-28 47th Ave., Long Island City 1, N. Y.—Booth 65
In attendance: S. Kahn, G. Hommel, L. Semmens.
Exhibiting: Isolation of machinery vibration.

VIKING AIR CONDITIONING CORP., 5601 Walworth Ave., Cleveland 2, Ohio—Booth 410
In attendance: Marion I. Levy, Frank Gibbons, Richard F. Gang, Laurence Bloom, Lyall M. Bush, Lowell A. McCord, Robert R. Briggs, John A. Green, Thomas J. McIntyre, M. F. Mackenzie.
Exhibiting: Furnaces — "complete-line-in-one-model"; new type of direct drive blower; blower package; night air cooling window fan. New "2300" humidifier which "fits all furnaces, does away with inventory problems, speeds installation" will be featured.

VIKING MFG. CORP., 1747 Chester Ave., Cleveland 14, Ohio—Booth 918
In attendance: H. S. Frasher, M. C. Cameron, T. L. Hildreth, A. C. Gustafson, L. J. Norton, W. P. Loer.
Exhibiting: "Flatpak" ductwork, gas and oil furnaces, gas floor furnaces, gas water heater, room cooler, packaged air conditioner, combination heating and cooling unit. Gas furnaces, basement and utility, shipped completely assembled and wired; new fittings for ductwork line; and new combination heating and cooling unit will be featured.

VULCAN RADIATOR CO., 26 Francis Ave., Hartford 6, Conn.—Booth 701
In attendance: John H. Ehn, Thomas L. Arnold, Richard B. Sweet, Joseph D. Pierce, John B. Rita, T. F. O'Connor, P. A. Cavanagh, J. P. Gilson, D. B. O'Neill.
Exhibiting: Extended fin surface radiators with metal covers; "Radi Vector" baseboard radiator. New baseboard cover and new "Lino-vector" covers for schools, institutions, etc., will be featured.

WAGNER STOKER BOILER UNIT, Box 360, Portsmouth, Pa.—Booths 147, 150

WALLACE CO., WILLIAM, Belmont, Calif.—Booth 221

WALTON LABORATORIES, INC., 1186 Grove St., Irvington, N. J.—Booth 714
In attendance: William Feldermann, John B. Feldermann, J. Robert Lewis, Ben Dickinson, Charles Bourgeois.
Exhibiting: Industrial, commercial, residential and office humidifiers; humidistat control and indicating equipment. New industrial humidifier, evaporating at the rate of 3 gph, will be featured.

WATERFILM BOILERS, INC., 154 Ogden Ave., Jersey City 7, N. J.—Booth 50
In attendance: A. R. Hanson, E. Wodecka.
Exhibiting: Residential steel heating boilers, and featuring packaged unit.

WATERMAN-WATERBURY CO., 1121 Jackson St., N. E., Minneapolis 13, Minn.—Booth 114
In attendance: H. G. Cross, Dave Sedgwick, Stuart Smith, Fritz Legler, Bill Morrissey, Roy Lonson, Otto Griefnow.
Exhibiting: Oil and gas fired seamless furnaces and winter air conditioners, oil and gas conversion burners. Downflow units for perimeter heating applications will be featured.

WATTS REGULATOR CO., Lawrence, Mass.—Booth 72
In attendance: Cyrus S. Gates, Ben G. Robertson, Ray Bitzer, Vernon Bitzer, Charles Lowrey, Carl Forvey.
Exhibiting: Complete line of plumbing and heating specialties, featuring dual controls and ASME accepted pressure relief valve.

WEBSTER & CO., WARREN, 17th & Federal Sts., Camden 5, N. J.—Booth 508
In attendance: Harold F. Marshall.
Exhibiting: Latest improved perimeter type baseboard heating; "Walvector" extended surface fin type radiator; latest improved "A System" radiation with built-in trap and valve; new convactor radiators. Special feature will be large panel showing isometric drawings of typical modern heating systems.

WEBSTER ELECTRIC CO., 1900 Clark St., Racine, Wis.—Booth 834
In attendance: S. A. Loeb, A. E. Kleckner, P. S. Crewe, B. T. Wiechers, Harold Hastings, William Touhey, Dave Munroe, Louis Ehrlich.
Exhibiting: "Thermodrive", electric fuel units, and electric ignition transformers, and featuring instantaneous cutoff for eliminating odors, smoke, soot, afterglow, flutter.

WEIL-McLAIN CO., Mfg. Div., Michigan City, Ind.—Booths 522-526
In attendance: T. D. Casserly, Walter C. Kern, Marvin Mitchell, Alex Schafer, Dan Schafer, Robert Stockwell, Phil Stockwell, W. G. Finnell.
Exhibiting: "Snug" baseboard panels (a new cast iron baseboard panel with radiant front); "Solray" radiators; "Raydiant" recessed radiation; oil heating unit; gas boiler; all fuel boiler; round boiler.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa.—Booth 41
In attendance: N. R. Miller.
Exhibiting: "Life Line" motors, starters, fractional horsepower motors and featuring a control center.

WESTINGHOUSE ELECTRIC CORP., STURTEVANT DIV., Hyde Park, Boston 36, Mass.—Booth 507
In attendance: J. G. Thompson, P. Cohen, T. E. Smith, W. B. Cott, H. M. Fisher, W. C. Goodwin, A. Martin, E. M. Powell, J. R. Welch, W. Brewer, E. C. Lambert, J. E. Justice.
Exhibiting: Air handling unit; hermetically sealed air conditioning compressors ranging from 2 to 100 hp; "Precipitron" electronic air cleaner; "Silentvane" fan; "Unitaire" conditioner. Encased "Precipitron", new 8 ton "Unitaire" conditioner, and central plant type air handling unit for heating, ventilating and air conditioning will be featured.

WHITE-RODGERS ELECTRIC CO., 1209 Cass Ave., St. Louis 6, Mo.—Booth 313
In attendance: Joseph Newman, J. A. Rodgers, Jack Searls, Ed Robinson, D. O. Eggert, Arnold Petersen, E. E. Harwood, F. Tanler, H. F. Killinger, Joseph Bierwirth, Jack Weigert.
Exhibiting: Complete line of automatic controls for heating, refrigeration and air conditioning, featuring "Hydraulic-Action" principle of temperature control. An operating demonstration board will illustrate typical forced warm air and circulated hot water heating systems.

WHITTINGTON PUMP & ENGINEERING CORP., 1126 Prospect St., Indianapolis 3, Ind.—Booth 28
In attendance: Dick W. Whittington, Charles W. Coward, Carl B. Eastman.
Exhibiting: Duplex vacuum heating pump, combination vacuum-pressure clinical unit, duplex condensation pump, and high pressure boiler feed unit. "Type HC" condensation pump and combination vacuum-pressure clinical unit will be featured.

WING MFG. CO., L. J., Vreeland Mills Rd., Linden, N. J.—Booth 111
In attendance: H. S. Wheller, C. H. Smith, T. R. Peyrek, George G. Nash, Ralph Hoxey, Joseph Pellicchia, Edward Hubert, F. A. Anstice, J. M. Hancock, Walter Schnabel, R. J. Purcell, R. P. Stebbins, Irvin H. Geiger, G. M. Comstock, R. J. McCarty.
Exhibiting: Axial flow ventilating fans; revolving discharge unit heaters, turbine and electric driven; process heater sections; transformer coolers; elbow and straight line duct fans; draft inducers; forced draft blowers; auxiliary turbines. Dual drive forced draft blowers, axial flow draft inducer, and variable temperature process heater sections will be featured.

WORTHINGTON PUMP & MACHINERY CORP., Harrison, N. J.—Booth 103
In attendance: W. H. Feldman, C. E. Wilson, T. J. Kehane, M. M. Lawler, W. F. Bishop, F. J. Watt, O. B. Wert, E. R. Michel, H. E. Wood, E. C. Hamilton, P. H. Shaw, D. H. McGee, J. R. O'Neill, W. J. Millett, S. R. Hirsch, R. E. Holmes, C. K. Hood, W. J. Daly, R. H. Croll, H. K. Beck, R. M. Cleveland, F. J. Blacker, W. S. Farnum, T. Hinant, W. L. Souther, H. Howell, R. O. Gundlach, C. Morrison, J. W. Watt, F. L. Andreoli, G. E. Tuckerman, H. F. Burpee, J. C. Conrad.
Exhibiting: Cutaway model of "Freon" reciprocating compressor; centrifugal refrigerating compressor; "Freon" reciprocating compressors ranging in capacity from 3 to 125 hp; room air conditioners; packaged air conditioner; evaporative condenser; central station unit; 3 x 3 ammonia refrigeration unit; "Freon" reciprocating condensing unit. The RYV series of room air conditioners will be exhibited for the first time; these units are suitable for multi-room installations such as hotels, apartments, hospitals and office buildings, and cool or heat the conditioned space using hot or chilled water pumped from a central source. The units are also available for use with direct expansion air conditioning systems.

YARNALL-WARING CO., Mermaid Lane, Philadelphia 18, Pa.—Booth 705
Exhibiting: Boiler blowoff valves, water columns and gages; steam line expansion joints; steam traps and strainers. Included in the display will be a working model of the standard "Yarway" impulse steam trap and samples of the new high capacity impulse steam trap.

YATES-AMERICAN MACHINE CO.—see GENERAL REFRIGERATION DIV.

YORK CORP., York, Pa.—Booth 800

YOUNG RADIATOR CO., Racine, Wis.—Booth 925
In attendance: F. M. Young, W. G. Schlichting, H. F. Brinen, P. J. Menden, F. C. Perkins.
Exhibiting: Air conditioning units; unit heaters; convectors; heating and cooling coils. New "YAC" air conditioning unit and low level convectors will be featured.

"Z" CRETE DIV., ZONOLITE CO., 3100 K St., N. W., Washington 7, D. C.—Booth 443

ZONOLITE CO., "Z" CRETE DIV., 3100 K St., N. W., Washington 7, D. C.—Booth 443



T H E R E I S A W A T E R B U R Y



F U R N A C E O R A I R C O N D I T I O N E R



F O R E V E R Y S I Z E A N D T Y P E O F H O M E



Waterbury

the **COMPLETE**
WARM AIR LINE

WATERBURY

OVER 44 YEARS OF



The last word in gas-fired winter air-conditioners. This truly modern unit is engineered for economy of operation and to provide the utmost in home heating comfort. Equipped with the latest in efficient gas burners, and beautifully styled to meet the demands of your most discriminating customers.

8 sizes . . . 60,000 to 240,000 BTU input



Completely automatic oil heat, providing filtered, humidified air—under an all-modern, streamlined casing. Easy access to all parts. Casing is designed so that it may be placed in any position in the basement. Here is real heating comfort for those of your customers who prefer to burn oil.

6 sizes . . . 75,000 to 145,000 BTU input



The aristocrat of the Waterbury line. This product of Waterbury's precision engineering is designed especially for oil. In sizes to fit homes that range in size from medium on up to the largest—a model that can be installed with confidence, whatever the heating requirements.

9 sizes . . . 164,177 to 437,805 BTU input



Waterbury's new and improved coal-fired line offers the greatest economy, both in original cost and in operation. The many new features of this unit, all housed in a casing of completely modern design, combine to give greater heating efficiency. It can easily be converted to gas, oil or stoker.

8 sizes . . . 95,400 to 153,000 BTU output

FURNACES

WARM AIR HEATING

A complete winter air conditioner with real economy of space. The Hi-Boy is ideal for homes with small or part basements, or without basements. Its compact casing houses an all-steel, welded, gas-tight heat exchanger and a quiet, efficient blower. Has gun-type or vaporizing oil burner—or gas burner.

4 sizes . . . 60,000 to 150,000 BTU input



HI-BOY SERIES
Gas or Oil-Fired
Air Conditioner



Waterbury has produced, in their gravity line, a furnace combining the beauty and durability of their air conditioners—with the economy of a gravity unit. The same choice of efficient Waterbury burners is offered—either the gun-type or vaporizing oil burners—or the Waterbury gas burner.

3 sizes . . . 80,000 to 130,000 BTU input



GRAVITY SERIES
Gas or Oil-Fired
Gravity Furnace



Especially built for homes using perimeter or floor panel heating. Cold air is taken in at top and forced downward into floor ducts. Occupies little space. Gives savings on original cost and operating cost. Waterbury Downflo units are finished in gleaming white enamel to match utility room fixtures.

3 sizes . . . 60,000 to 120,000 BTU input



DOWNFLO SERIES
Gas or Oil-Fired
Air Conditioner



An improved gas conversion burner, that uses the same, efficient, new model burner found in all the Waterbury gas-fired units. Attractive—compact—safe—this conversion burner was designed and built to provide automatic gas heat for those homes in which a good heating plant is already installed.

1 size . . . 200,000 BTU input



G200 SERIES
Conversion
Gas Burner



WATERBURY'S WIDE SELECTION MEANS

Satisfaction

RIGHT DOWN THE LINE

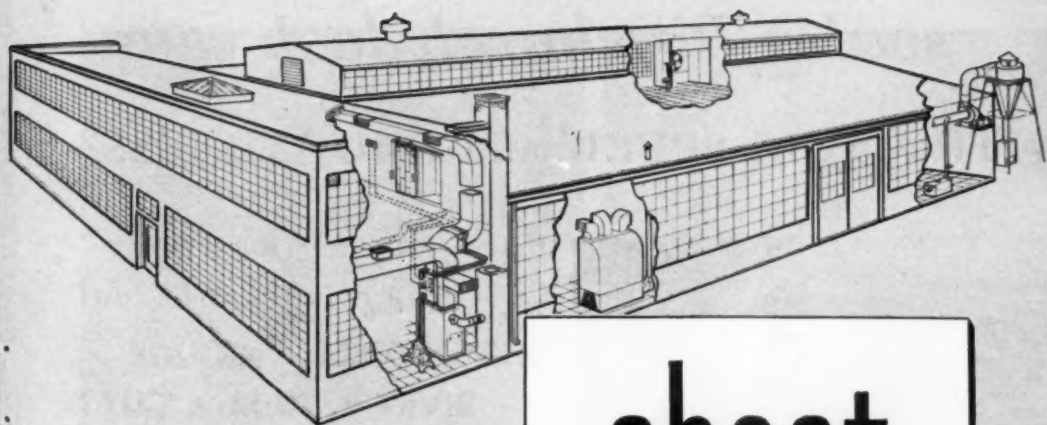
DISTRIBUTORS have the advantage of a complete line of quality heating equipment. They enjoy territory and distribution rights and a close factory relationship.

USERS have come to realize that the *right* furnace for *their* home means satisfaction and economy. They have confidence in the name Waterbury and in the dealer who installed their unit.

DEALERS are finding they have a *complete* line to satisfy *all* their prospects—a growing line backed by distributor and manufacturer alike.



The Waterman-Waterbury Co. 1121 JACKSON ST. N. E.
MINNEAPOLIS 13, MINN.



sheet metal *Section*

*Design • fabrication • installation
of sheet metal products*

Have you ever seen an
APPTON SUPER HAMMER
seal a Pittsburgh lock seam
WITH MAGIC SPEED and SMOOTHNESS?



Simply guide the hammer over the edge of the seam. Seals 4 times faster.

*Have you ever watched
 this remarkable tool*

**CHIP • DRILL • GOUGE
 RIVET • TRIM • CUT?**

Our fifty years of experience in designing air tools are embodied in this amazing high-speed hammer which has become known in shops throughout the country because one pleased user has told another. New type—powerful—light weight—No "Kick"—perfect control—contact operation.

***Why pound away your profits
 with an old fashioned mallet?***



Drilling: More blows per minute. Light in weight. No trigger or recoil. Baffle control. Uses very little air.

**DRILLING HOLES IN HARD
 BLUESTONE CONCRETE**

3/8" Dia., 1" Deep . . 8 Seconds
 1/2" Dia., 1 1/2" Deep 12 Seconds
 3/4" Dia., 2" Deep . 35 Seconds
 1" Dia., 2 1/2" Deep 62 Seconds

Slip off the Flattener and Guide, after you have finished sealing seams and take the hammer out on the job for every installation problem in cutting, chipping, drilling, trimming, gouging, small riveting, scaling and caulking.

Popular throughout the WEST.

Write for particulars . . . quick delivery

Manufactured by the
BROWN-APPTON CO.,
 681 Fifth Ave.
 New York City

Distributors

The OLIVER APPTON Co.
 260 BROADWAY
 DENVER 9, COLORADO

Air Conditioning Insurance Building Requires 2½ Million Pounds Of Metal



Installing stiffeners in a large aluminum duct for the job.



The John Hancock Building in Boston, recently completed.

LAWRENCE GICHNER

Fabrication on the site was the plan followed in this very large installation.

ATHREE and a half year air conditioning job involving over 2.5 million pounds of galvanized steel and aluminum was just recently completed on the new home office building of the John Hancock Mutual Life Insurance Co. in Boston.

It is one of the largest installations for complete summer and winter air conditioning in the world. Thirty million cu ft of air are being circulated through the building every

hour, by 100 supply and exhaust blowers varying in size from 1 to 40 hp.

Every bit of the ductwork was fabricated right on the job site by the Stanley E. Priggen Co., sheet metal contractor of South Boston. A total of 125 sheet metal mechanics were employed on the project. An average of 40 men worked in the shop and the rest engaged in assembly and erection.

A job shop 100 ft by 100 ft was set up in the basement of the building complete with shears, lock forming machine, power edger and a dozen hand brakes. As the building progressed the hand brakes were moved about, close to the scenes of operation.

All ductwork was led to the outside of the building where blenders located under window sills were supplied with air. These supply ducts were run on the furred ceilings below each floor they serviced. Return grilles were installed along exterior walls. Interior spaces are served by supply and return ceiling diffusers.

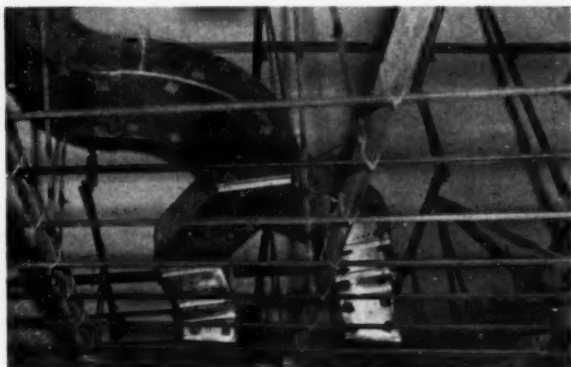
The greatest number of ducts were made of 24 and 22 gauge sheets, but 20, 18 and 16 gauge sheets were also used. Depending on the size,



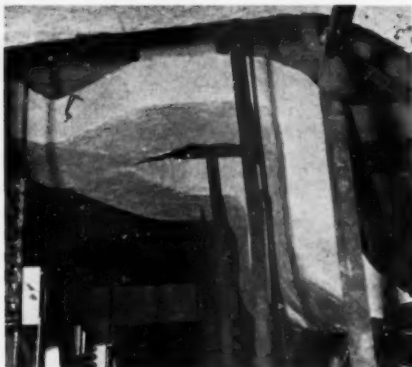
Ductwork was designed to fit into the existing structure.



Leveling one of the many blowers required by the system.



View of aluminum ducts prior to application of insulation.



Here are the ducts after insulation.

ducts were reinforced with angle iron varying from the lighter angles all the way to 2 by 2 by 5/16 in. on ducts that were 18 to 20 ft wide. All concealed ductwork is insulated with 1 in. of cork and covered with magnesia cement.

Mechanical equipment is grouped in the sub-basement, 15th floor, and 27th floor. Air supply for cooling towers in the roof comes from louvers in the building wall. Throughout the building there are some 65 air conditioning and exhaust ventilating systems.

Two buildings were air condi-

tioned at the same time, the impressive new 26 story building and the 11 floors of the adjacent Clarendon Building. In the Clarendon Building much of the ductwork is exposed. All return and supply lines located at the ceiling are even and flush on the bottom. This was accomplished by placing all reinforcing frames on the inside of the duct. The ducts have the appearance of being an integral part of the structural beams, which is exactly the effect desired.

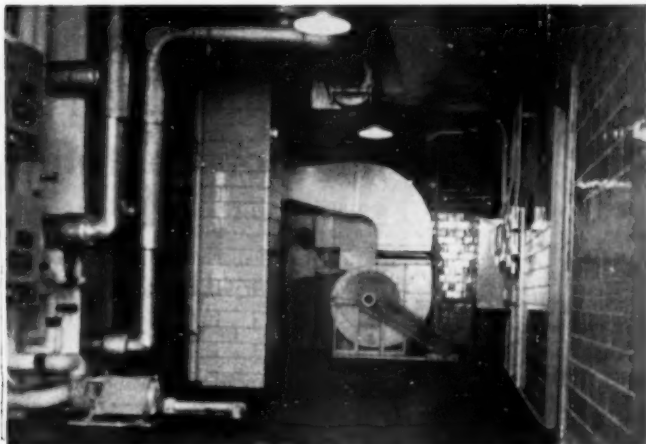
There are 8 large aluminum blower houses on the Clarendon Building which supply the eighth to the second

floor. The basement and first floor are supplied from a sub-basement.

In the sub-basement of the new building there is an impressive exhibit of modern instrument engineering, the central recording room. On an instrument board 51 ft long by 86 in. high there are 27 multi-record dynalog temperature recorders, 13 dial type pressure indicators, 12 concentric and 2 eccentric temperature indicators, 26 fan switch panels and 10 automatic switching units, all in connection with the air conditioning system and related service facilities.



Access door to filter bank



View of mechanical equipment in 15th floor.

The 27 multi-record dynalog instruments each make three records in different colors on a single chart. They show dry bulb temperature and dew-point temperature of the discharge air, and temperature of the air returning for recirculation. All the charts run for 24 hours thus providing a complete and comprehensive record for the entire air conditioning system.

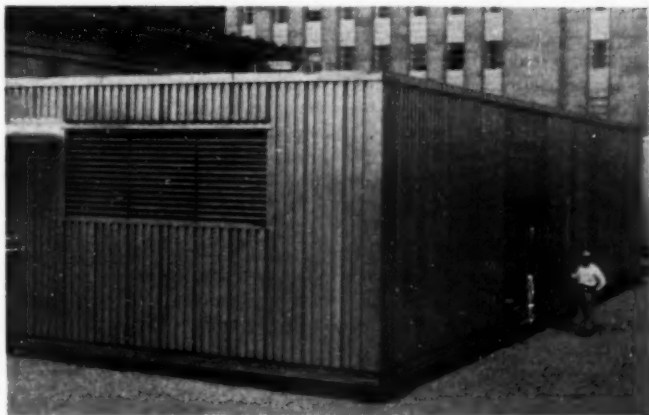
Valuable Charts

These continuous records, in addition to providing the engineers with a full day's operation report, give guidance for supervision of the air conditioning throughout the building. With time the files of these charts will furnish data for maintenance of comfort conditions in all seasons with greatest efficiency. Should any trouble occur or equipment cease to function the charts will help locate the faulty conditions and lead to its prompt correction.

The kitchen exhaust system extends to the roof in masonry shafts for fire protection, and is fabricated of 11 gauge steel insulated with magnesia blocks. Eight electric dumbwaiters serve between the kitchen on the sixth floor and the cafeteria on the seventh floor. The dumbwaiters have stainless steel cars and stainless steel doors, in keeping with the other equipment on these floors.



Stainless steel kitchen for employee cafeteria.



One of the large aluminum blower housings.

Comparison of Suction And Pressure Ratings of Centrifugal Fans

HOWARD M. NICHOLS*

When it is necessary to check the pressure rating of a centrifugal fan it is helpful to know the proper method of doing it. The pressures are defined and checking technique presented.

SHEET metal contractors frequently test exhaust systems by measuring static suction at the inlet and static pressure at the outlet, adding these two readings together, and assuming that the result represents the centrifugal fan static pressure as given in the performance tables. However, this is not true since the sum of these two readings is greater than the static pressure by the amount of velocity pressure at the inlet. Also, if all duct is on the inlet side of the fan and there is no discharge duct, then a suction reading taken in this duct adjacent to the inlet will be greater than the true static pressure rating. However, if the fan is operating entirely on a pressure system, then a static reading at the outlet does represent the true static pressure. Or, a static tube reading taken in a pipe the same diameter as the fan outlet and at a sufficient distance from the outlet to obtain smooth air flow (near the outlet the flow is disturbed and this affects the accuracy of readings), and corrected for loss due to pipe friction from the outlet to the point of test, does represent the true fan static pressure.

Accepted Ratings

For a satisfactory understanding and interpretation of fan pressures, knowledge of the accepted definitions, method of rating, and testing adopted by representative fan manufacturers is useful.

*Westinghouse Electric Corp.
Sturtevant Div.
Hyde Park, Boston, Mass.

The National Association of Fan Manufacturers publishes a Standard Test Code for Centrifugal and Axial Fans which defines the various pressures involved in fan applications as follows:

"1. The total pressure (P_t) of a fan is the rise of pressure from inlet to outlet as measured by two impact tubes, (where no inlet duct is used the total pressure on the inlet side is 0 and no pressure readings on the inlet side shall be taken) one in the fan inlet duct and one in the fan discharge duct, corrected for friction to the fan inlet and outlet respectively.

"2. The velocity pressure (P_v) of a fan is the pres-

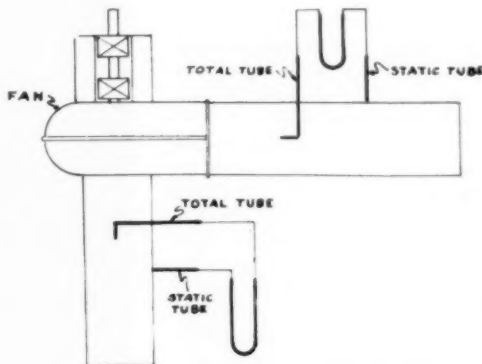


Fig. 1 Velocity Pressure Measurement

sure corresponding to the average velocity determination from the volume of air flow at the fan outlet area.

"3. The static pressure (P_s) of the fan is the total pressure (P_t) diminished by the fan velocity pressure (P_v)."

Reading Velocity Pressure

Velocity pressure (not necessarily fan velocity pressure) may be read on a U gauge at any place in a pipe as the difference between an impact and a static tube reading (see Fig. 1 — for convenience, the static tube is shown as a pinhole connection on side of the pipe), or it may be computed from the volume of air flow by means of the formula:

$$V = 1096.2 (P_v/d)^{1/2}$$

Where V equals the air velocity in fpm at the point in question and d equals the density (weight per cu ft) of air under the condition of measurement.

Density of standard or normal air is .075 lbs. per cu ft and substituting this value in the velocity formula we obtain

$$V = 1096.2 (P_v/.075)^{1/2}$$

$$V = 4000 (P_v)^{1/2}$$

$$P_v = V^2/(4000)^2$$

Pressures are in inches of water and velocities in fpm.

Use of Pitot Tube

The standard test code provides that pressure determinations be taken with a standard pitot tube (Fig. 2) at a point where the flow is uniform. For pressures at fan outlet, readings are taken a sufficient distance from the outlet to obtain uniform flow and then corrected to outlet conditions. For convenience in illustration,

the figures show the pitot tube near the fan outlet. Where accurate results are required, readings are taken farther from the outlet.

A true picture of the pressure relations at fan inlet and outlet is obtained by taking readings on each side of the fan with an impact tube (Fig. 3). The difference between these two readings always gives the total pressure developed by the fan. This is true whether the fan is a blower with free inlet or an exhauster with free outlet. In the case of the blower, an impact tube placed in the inlet would read zero. In the case of an exhauster, an impact tube placed in the outlet, with no duct on the outlet, would read velocity pressure.

From the difference in readings of these impact tubes on opposite sides of the fan, subtract the velocity pressure at the fan outlet. The remainder is the static pressure the fan produces (rule 3, standard test code). There is no exception to this rule. It holds for equal areas at inlet and outlet, or unequal areas.

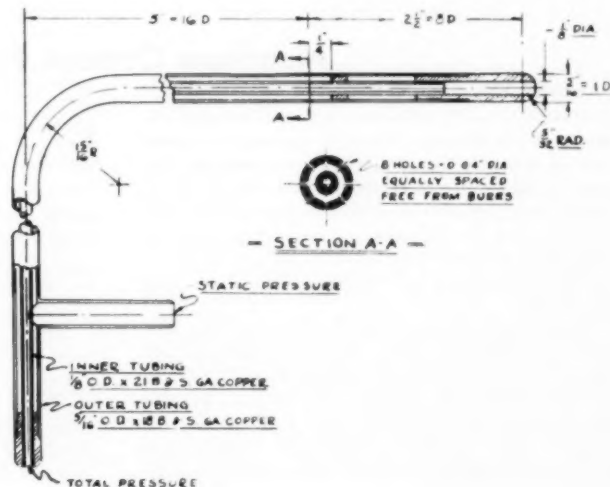
Types of Pressure

Physically, the various pressures may be considered as follows:

1. Velocity pressure represents the kinetic energy of the moving air stream per unit of volume.
2. Static pressure represents the potential energy of the air per unit of volume.
3. Total or dynamic pressure is the sum of kinetic and potential energies and represents total energy per unit of volume.

If it is desired to make a direct measurement of static pressure, it can be obtained by a differential reading between an impact tube in the inlet duct and a static tube in the outlet duct, providing both ducts have the same diameter as the fan outlet. (Fig. 4)

Fig. 2 The standard pitot tube is the prescribed method of taking pressure determinations. In using the tube it is necessary that it be located away from the turbulence created by the fan.



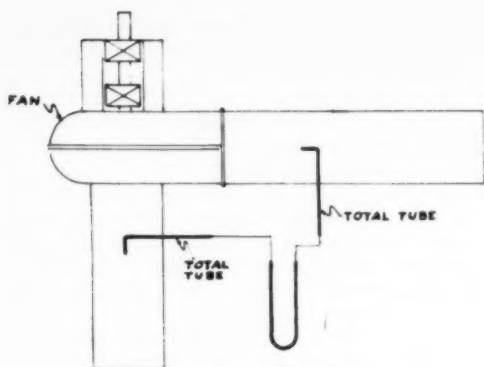


Fig. 3 Measurement of Fan Total Pressure

System calculations can be simplified by using total pressure values rather than static values. Having determined the total pressure required by a system, a fan can be selected on a total pressure basis by adding the velocity pressure at the outlet to the static pressure rating given by the manufacturer.

A practical demonstration of the fallacy of adding the static suction reading at the inlet side of a fan to the static pressure reading on the discharge side to get static pressure can be made with a fan having discharge pipe only (Fig. 5). Assume this discharge pipe to be the same diameter as the fan outlet. Then the reading A represents true fan static pressure. It might be 5 in. w.g., due to the resistance beyond the measuring point. Now to the inlet side of the fan, add a short section of pipe (shown by the dotted lines) having a bell-mounted free inlet. This short section of pipe will add practically no resistance to the system and since there is no other change, tube A will continue to read 5 in. However, tube B will show a suction reading equivalent to the velocity head in the air stream. If this velocity is 4000 fpm, tube B will read 1 in. suction. If the reading at A is 5 in., the apparent fan static pressure is 6 in.

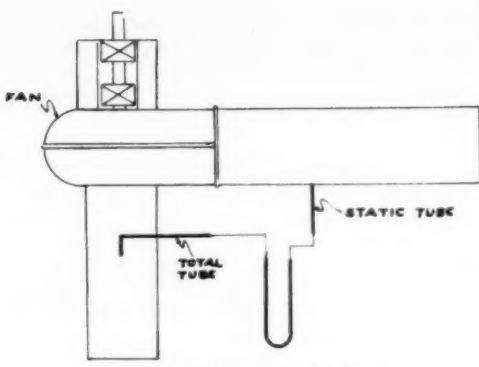


Fig. 4 Direct Measurement of Fan Static

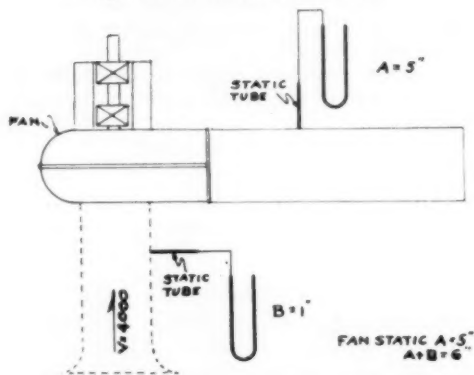


Fig. 5 Effect of Adding a Pipe to the Inlet Side of a Fan

Without the inlet pipe a static fan pressure of 5 in. was obtained. Since the addition of the dotted section of pipe does not change the fan performance, the fan static pressure must remain 5 in. and not 6 in., which is obtained by erroneously adding readings A and B together.

Aluminum Outlook For 1951

Aluminum production will climb in 1951 to over 1,600,000,000 pounds, within 10 per cent of the peak year during World War II, Richard S. Reynolds, Jr., president of Reynolds Metals Company has predicted. Primary aluminum output has increased so sharply during recent years that 1951 production will be double 1946. Further expansion of capacity, already agreed upon, will enable the three producers to achieve a rate of 2,200,000,000 pounds a year in 1952, a 50 per cent jump over 1950.

Despite the substantial increase in supply, total military and civilian demand in 1951 is expected to be still greater. In contrast to the situation prevailing on the eve of World War II, aluminum has become a standard and preferred material for a wide range of essential civilian uses, including construction, transportation equipment, household appliances, and protective packag-

ing. In the military field, its uses have also spread far beyond aircraft construction as greater emphasis has been put on an air-borne army. Although aircraft is still the largest single military use for aluminum, it is being used for hundreds of other items — from bazooka barrels to pontoon bridges and portable huts. An adequate aluminum supply under conditions of full mobilization will therefore have to include large quantities for military uses other than aircraft and substantial amounts for essential civilian uses.

Special care must be exercised in making the shift from civilian to military production, Mr. Reynolds warned, to avert the loss of skilled manpower at key aluminum fabricating mills. A sudden stoppage of civilian operations at these mills before there is any indication of what military orders will fill the gap, can only lead to shutdowns and unemployment.

Steel and National Defense

Recently the Chicago Association of Commerce and Industry was addressed by Mr. Block, vice president of Inland Steel Company. His remarks on the past accomplishments and future plans of the American steel industry are so timely and pertinent that we present them here.



Joseph L. Block

SURELY no one in this audience is too young to remember — and remember quite vividly — those stirring wartime speeches of that great statesman, that master of rhetoric and oratory, Britain's indomitable leader, Winston Churchill. No doubt many of you listened to the radio, as I did, on that wintry Sunday in February 1941 when, with head held high, he reported to the world regarding the magnificent accomplishment of his countrymen in singlehandedly holding at bay the combined forces of the Axis powers. This was the speech in which he made his never-to-be-forgotten "answer to President Roosevelt." Let me recall his words: "Put your confidence in us. Give us your faith and your blessing, and, under Providence, all will be well. We shall not fail or falter; we shall not weaken or tire. Neither the sudden shock of battle, nor the long-drawn trials of vigilance and exertion will wear us down. Give us the tools, and we will finish the job." Surely at that early date Mr. Churchill had no more foresight than you or I of the portentous events that were to come, the German invasion of Russia, the Japanese treachery at Pearl Harbor and all that followed. But "Give us the tools" became the rallying cry for all America, and the United States was transformed into the Arsenal of Democracy in 1941 and for the next four years of all-out global warfare.

Steel for the World

As we all know, the tools were supplied not only to the British, the Russians, the Free French and our other allies but also to gigantic American armies, navies and air forces, fighting in all the far corners of the world. And what were these tools which made possible such complete and devastating victories for our country and our allies? Let's name but a few of the principal tools. There were great airplanes powered by enormous engines made of steel, tanks and trucks and countless other military vehicles made of steel, guns and shells and bombs and weapons of every description made of steel,

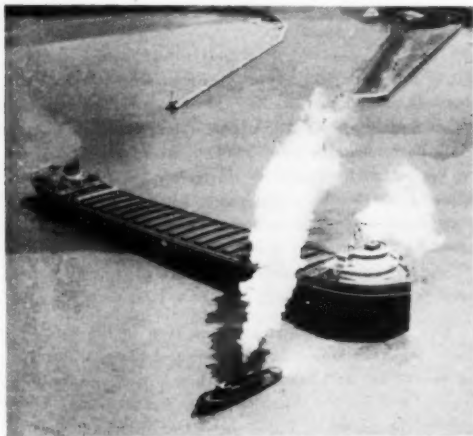
battleships and carriers and cruisers and destroyers and other naval vessels made of steel; yes, even atom bombs built in tremendous plants made of steel. But undoubtedly the tools which were of the greatest importance, and without which all the rest might have been of no avail, were the thousands of merchant vessels which transported most of the men and materiel from the Arsenal to the fighting fronts. And these, too, were of course made of steel.

The principal component of a ship is the hull, and hulls are built almost entirely of steel plates. America, in peacetime, had never been known as a ship-building nation, and yet the American steel industry was able to supply the plates to build this great merchant fleet, at the same time furnishing plates for naval vessels, tanks and much else, to the amazement of the world. The steel industry increased its plate output following Pearl Harbor for each of eight consecutive months, at which time it had doubled its output of a year earlier and more was yet to come. All this was done without the benefit of new facilities and despite the fact that the industry was already operating at full capacity prior to our entry into the war and throughout the year 1941. How was this great achievement possible? Therein lies a tale which I shall relate — a story which I believe carries with it the secret of the great American production during World War II and the hope for our strength and security in the present and in the years that lie ahead.

A scant quarter of a century ago steel sheets were produced solely by the hand-mill method. Oblong pieces of semi-finished steel called sheet bars were heated, grasped by the tongs of brawny workmen and passed back and forth between the rolls of the mill, sometimes doubling and quadrupling the resultant product back on itself, until the desired thickness was attained. It was difficult and costly work, and the quality and uniformity of the product left much to be desired. Yet it was the only method known at the time and was employed by

our company and all others in the industry.

Well do I remember that day early in 1927 when the president of our company circulated among our officials a letter he had received from a friend in Pennsylvania. This gentleman wrote that a concern in Butler, Pennsylvania, the Columbia Steel Company, had constructed a mill involving a series of stands, each four rolls in height, on which steel sheets as wide as 36 in. were being produced by a continuous, straight-line method and that the product was exceptionally high-grade. To Inland officials and to steel men everywhere this was news of the first magnitude. Bars, structural shapes, rails, plates, even narrow strip had been produced continuously and mechanically for some time, but no one had believed that such mills could exert sufficient pressure to pro-



S.S. WILFRED SYKES on maiden voyage

duce sheet steel as thin as 1/16 in. which would be commercially acceptable. However, by using the four-high principle, two working rolls, reinforced by two backing-up rolls, and by the contour of the rolls, the job was done.

By the end of the year 1927 the American Rolling Mill Company purchased the plant at Butler and immediately built a similar mill 68 in. wide at Ashland, Kentucky, and then, in 1928, another 72 in. wide at Middletown, Ohio. One year later Wheeling Steel Corporation also built a continuous hot strip mill, as the new mills were named, this one being 66 in. wide and located at Steubenville, Ohio.

By this time no one in the steel industry doubted that the hand operated sheet mill was doomed to go the way of the horse and buggy. However, these new mills came high, running into many millions of dollars, and a horrible pestilence known as the Great Depression had set in in these United States of America. Like all others, the officials of our company knew that if we intended to stay in the sheet steel business we would have to make sheets by the continuous method. And they knew, too,

that if we wanted to stay in the steel business, we had better stay in the sheet business, for the American public seemed to be showing a great hankering for things made out of sheets, and in 1929, the last year before the Big Bust, had actually purchased more than five million automobiles and trucks.

So depression or not, the Inland management struck out boldly, and in 1932, with business at its very lowest ebb, they began operation of the biggest continuous hot strip mill constructed up to that time and the first in the Chicago area. Its rolls had a width of 79 in. No commissar, no control board told them they dared not take this venturesome step in such perilous times. They consulted only their own best business judgment, including their ability to finance the project.

No other steel producer built a wide mill until 1935 when the economic skies had cleared considerably. Then and during the ensuing five years each of the larger companies, facing squarely the question of its own survival, constructed one or more of the new type mills, a few of which were almost 100 in. wide. Our company built a second continuous mill in 1938. By 1940, 27 four-high continuous hot strip mills had been constructed in the United States, and of these ten could roll material 72 in. or more in width. And again, no super planning board had asked the question of whether too many of these giant structures had been built or whether the steel fabricating industry could consume their output. In fact, great doubt was expressed by many on this last score, but that did not deter the individual companies each of whom knew that, in order to maintain its share of the market, it must be competitive in quality and in cost.

Ships Need Steel

I return now to the United States at war following that horrible, bloody Sunday, December 7, 1941. The government demanded ships and the shipbuilders demanded steel plates. The steel mills of America going full blast were producing about 600,000 tons of plates a month, and the projected requirements for all purposes were over a million tons. The industry was prodded to build new plate mills, but even in wartime new mills take from one to two years to build, and Hitler and the Japs gave no evidence of remaining quiet in the meantime.

A group from the industry, of which I was a member, was called to Washington to tackle the job. A rapid survey of all possible plate producing facilities was immediately undertaken. Not only the regular plate mills but all the continuous strip mills were carefully scrutinized. Please bear in mind that these mills were built to produce thin-gauge material, generally under 1/4 in. in thickness whereas ship plates run from about 3/8 to 1 in. thick. Although all the wider strip mills could roll plates, in many cases they did not have the finishing facilities to shear and handle the material. Nevertheless they were asked to make all the plates they could on

their continuous strip mills, and secure the necessary auxiliary equipment as rapidly as possible.

They did a magnificent job. Countless stories of human ingenuity could be told. At times plates were even loaded hot in the freight cars. In some cases they were shipped unsheared leaving that job for the shipyard. The net result was that strip mill production of plates rose from 169,000 tons in November, 1941 to 550,000 tons by July, 1942 in which month the total plate production from all types of mills was 1,124,000 tons. Thereafter, never less than a million tons per month, often considerably more, the output of steel plates was ample to meet all the needs of the war program.

I have told the story — the tale which I said carries the secret of our past success and the best hope for the future. Why did we succeed? Because we had the strip mills, of course. But, why did we have the strip mills? There were none on the entire continent of Europe and only one in England. Why did we have them? You know the answer. We had them because we were free, free to imagine, free to plan, free to build, free to compete, free to profit — yes, just plain free and because we were free we were strong.

I have gone into some detail on plate production in World War II — possibly the most important job done by the steel industry during the conflict — merely by way of illustration. It was by no means the only phase of steel's magnificent contribution to victory. Many another story could be told, but I will only cite, and then but briefly, one other accomplishment of the industry. As you will recall, second only to the need for ships, were the urgent requirements for airplanes and tanks. But the steel which went into this equipment was not of the ordinary bread and butter variety — not, to use the terminology of the industry, plain carbon steel. It was alloy steel — alloy steel varying and difficult in composition — alloy steel far in excess of the quantities ever previously produced or needed.

Emergency Steels

But here again the industry came through with flying colors. It constructed additional electric furnaces in record time; it learned how to make alloy steels in open hearth furnaces; it developed new and fully satisfactory National Emergency Steels, conserving the use of precious alloying elements. In the year 1943 the steel industry of the United States produced more than 13 million tons of alloy steel ingots, 160 per cent more than the 5 million tons made in 1940, a tonnage adequate to meet all the needs of the plane and tank makers, as well as to fill the other military and essential civilian requirements of the war. Just as in the case of plates and many another war need the ingenuity of free Americans, fortified by years of experience, met the challenge and delivered the goods.

A decade has passed. What can we say of the steel industry of today and its ability to again provide the sinews of defense for all-out war should such a catastrophe



Blast furnaces at a modern steel plant

be the fate of mankind? Let us look at the basic indicator, the industry's capacity to produce steel ingots. In 1940, the year in which the Nazi hordes swept over Europe and Britain stood alone, the figure was 80 million tons. In 1944, the year in which the great Allied armies stormed the beaches of Normandy, the industry produced almost 90 million tons. Today the industry's capacity is 100,500,000 tons. It is now producing at that rate or better and has been doing so for some time. In fact, in October production hit an all-time high. And two years hence, in 1952, according to an announcement made by Secretary of Commerce Sawyer early last month, its capacity will have risen another 110 million tons. I do not doubt that additional programs, some already announced, will substantially increase that figure.

Enough Capacity?

But will this be enough? Enough for what? To fight and win a great war or to meet every possible requirement of both war and peace? These remarks, I remind you, are on the subject of Steel and National Defense, and it is to this requirement that I now direct my immediate answer although I will have something to say on the broader subject after that.

I know of but two yardsticks by which we can measure steel requirements for national defense: First, our experience in the last war and, second, the capacity of any potential enemy. Let us analyze them in that order. With our present ingot capacity we can conservatively produce about 70 million tons of finished steel mill products — plates, structural shapes, bars, sheets, pipe, wire, rails, etc. In 1952 another 7 million tons will be added. Now contrast those figures with these. In 1943, the year in which the largest tonnage of steel went into direct war needs, these requirements took less than 23 million tons of finished steel products, including 11½ million tons for naval and merchant ships and 2½ million tons for building defense plants and cantonments. Surely we would not again have to start from scratch in constructing a navy or merchant marine. Nor would it be necessary to build plants for war production in as great numbers as in World War II. In 1943 we used only 38 per cent of our steel for direct war needs, but let us cast that historical record aside and suppose that



Charging hot metal into an open hearth

a new war needed 50 per cent of our presently projected 110 million ton 1952 capacity. This would be 15 million tons more than in 1943. Even then we would have more steel left over for other essential needs than we had in 1913!

What about the other yardstick — the capacity of a potential enemy? I have heard of no potential enemy in an all-out war except Russia. Although no official estimate is available the most extravagant figures on the combined ingot capacity of Russia and her satellite countries range from 30 to 35 million tons, about one-third of our own capacity, to say nothing of that of our allies which would increase our combined output by another 50 per cent. Let's look at it another way. God grant that there will be no more great wars, let alone one in which the United States might fight the rest of the world alone. Yet, should this tragedy come to pass — were steel alone the criterion — victory would be ours, for even the present capacity of this country exceeds by 9 per cent the total steel produced by all the other countries of the world in 1949. The output of American furnaces, operated at today's capacity for one year, would be 8,800,000 tons greater than last year's production of all the other countries on the face of the globe, including Russia and the Communist-dominated lands. Yes, gentlemen, Uncle Sam has plenty of steel for his defense needs, and more is to come.

Too Much for Peacetime?

Now let's take a good square look at the controversial question of the adequacy of the steel industry's present and projected capacity to meet both the defense needs and those of the civilian economy. Five years ago when the war ended, and from time to time in the ensuing years, various responsible leaders in the industry expressed the opinion that steel capacity was ample, perhaps even excessively large, in relation to the requirements of a peacetime economy. I must confess that I shared that view. That we were wrong in the light of subsequent developments no honest individual can deny. However, these beliefs were prompted by no selfish attempt to create an economy of scarcity but sprang from

a knowledge of the records of the past from which no one could have secured a clue to the tremendous sustained boom the country has enjoyed since the cessation of World War II hostilities.

The steel industry is a favorite whipping boy for demagogues who hurl many a falsehood about it at the unsuspecting public. One of the most vicious, unfair and untrue of these has been the accusation that the industry has been engaged in a conspiracy to hold down production. Nothing could be farther from the truth.

In our company we have been spending record sums of money annually since 1945 to improve and expand our production. In order to do this we reinvested our undistributed earnings and borrowed money against our properties to as great an extent as sound business judgment warranted. We are now engaged in a new construction program to add an additional 20 per cent to our ingot capacity. Why did we do all this? We did it for the same reason that we built the big strip mill in 1932 — to maintain and, if possible, to improve our competitive position in the industry. Practically every other steel company has done exactly the same thing, and no one who took the slightest trouble to ascertain the facts could possibly deny it.

These vast expenditures of the industry totalled 2.5 billion from 1946 to 1949, about one-third of the total amount of money invested in the industry prior to that time. Another \$500 million is being spent this year, and that rate will be exceeded in each of the next two years. These sums are not proportionately reflected by the increase in the ingot capacity for it was necessary to make enormous capital outlays for new and enlarged finishing facilities, particularly for the production of such flat-rolled steel products as sheets and tin plate. Some uninformed individuals question the propriety of those expenditures as contrasted with basic ingot capacity, but they know not whereof they speak. The greatest demand has been for these products.

How did the automotive industry increase its production from 5 million units in 1941 to an 8½ million unit rate in 1950, at the same time supplying the consumer with steel tops and wide sweeping fenders and bodies? By receiving from the steel industry three times as large a tonnage of cold-rolled sheets as it did a decade earlier. What enabled the appliance industry to flood the American home with new and better refrigerators, stoves, washing machines and kitchen cabinets? And the canning industry to multiply many-fold the products it placed in the stores and on the cupboard shelves of the nation? Only the tremendous increases in the tonnage of sheets and tin plate they received from the steel industry made these great achievements possible. Even today, with all the expansion, it is easier to buy ingots than to secure sheet steel or tin plate.

And I am sure you need not be too technically trained to realize that new steel ingot capacity requires new pig iron and coke capacity, and all of that points up the need for far greater reserves of raw materials. Therefore,

the industry has embarked on a tremendous program involving the construction of coal and ore beneficiation plants and the exploration and development of new ore properties, some of which are as far distant as Labrador, Venezuela and Liberia. To transport these materials railroads must be built, new lake and ocean freighters constructed.

A few of the self-same individuals who so belligerently demand that the industry expand are the first to criticize even the slightest advance in price. Yet experts estimate that completely new steel capacity from the raw materials up would cost about \$300 per ton of annual product output. You may be surprised to know that the entire steel industry made less than \$10 per ton on all the steel it shipped last year. Who would care to invest risk capital which after proper deprecia-

tion charges and higher corporate income taxes would probably yield in dividends less than 2 per cent? Increases in steel prices placed in effect to offset increases in steel costs are, of course, essential. However, they will not change this picture by making the issuance of new equity financing in the steel industry any more attractive to investors. In this connection, it is interesting to me to note that one of the few steel leaders who has had the courage to speak up on this question of the need for higher prices to finance new construction is Admiral Moreell, chairman and president of Jones & Laughlin Steel Corporation, a gentleman who spent the greater part of his life in government service.

But will there be adequate steel capacity when the present expansion program is achieved two years hence? No one knows for certain. Some claim that this will not be nearly enough. Perhaps they are right. Perhaps they are not. But one thing is sure—if there is not enough, the industry will continue to grow until there is. I have never yet seen a businessman in this free country of ours who did not seek and find ways to increase his company's output when the demand for his products exceeded his supply. As long as we stay free this may be regarded as axiomatic. We make the most steel, the

best steel, and the lowest cost steel, and we pay the highest wages to our employees. But let us not forget how this came about. It flows entirely from the full play of free, competitive forces—the same forces which gave us our strip mills, our wartime plates, our ships, our victories. Let us as a nation never be deluded into thinking that the royal road to sufficiency in steel—or in any other phase of our industrial production—is through government owned and operated facilities. Such a path could not fail but lead us into great peril, for without the competitive system, spurred on by the profit motive, the very foundation of our great economic system could easily rot away, making us prey to dictatorship at home and aggression abroad.

I have spoken thus far primarily about steel production—why it was adequate for the great needs of World

At the right is shown a 44 in. continuous strip mill with its adjacent furnaces. The furnaces are in the right foreground of the photo and the strip mill runs back the length of the shop. The photos which illustrate this article were supplied by Inland Steel Co.



War II and why we may feel assured of its adequacy in the future both for defense and for civilian requirements. I have emphasized the importance of maintaining freedom in the control of production. What I have said about production can also be applied to distribution.

As all of you know, the National Production Authority has recently been established in the Department of Commerce to implement certain portions of the new emergency control legislation enacted by the Congress. Although in existence less than three months it is rapidly imposing on industry in general, and the steel industry in particular, a very comprehensive system of priorities and allocations.

Now I would be the very last to deny the propriety of any steps the government might take to assure the flow of material for direct defense needs, whether we be engaged in a cold, warm or hot war, or no war at all. The DO priority ratings which have been established are designed to do that, and they will accomplish their purpose whether the steel requirements for direct defense be an average of 5 per cent of the supply, as now estimated, or a substantially larger portion.

But the NPA is going much further than that. Already

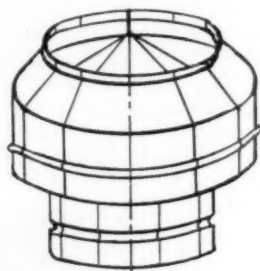
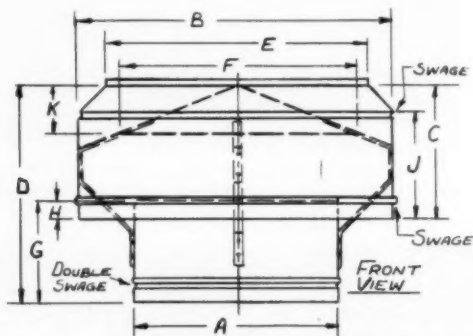
(Please turn to page 274)

OWING to the number of requests AMERICAN ARTISAN has received from readers regarding stationary roof type ventilators, two articles will be devoted to this subject.

This article presents a variable dimension table, an exhaust capacity chart and a step by step analysis for

calculating 6 changes of air per hour in a building 100 ft long, 40 wide and 35 high as shown.

The second article will present the pattern development for the stationary roof type ventilator. The simplified method of layout will be stressed and a step by step procedure will be shown for each pattern.



PICTORIAL DRAWING

VARIABLE DIMENSIONS FOR STATIONARY TYPE VENTILATOR

A	B	C	D	E	F	G	H	J	K	GAUGE GALV. IR.	WT. OZ. COPPER
6	9 $\frac{1}{4}$	4	7	7 $\frac{3}{4}$	7	4	1	3 $\frac{1}{4}$	1 $\frac{1}{2}$	24	16
8	12 $\frac{1}{2}$	5 $\frac{1}{4}$	8 $\frac{1}{4}$	10 $\frac{1}{2}$	9 $\frac{1}{2}$	4	1	4 $\frac{1}{4}$	2	24	16
10	15 $\frac{1}{2}$	6 $\frac{3}{4}$	10 $\frac{3}{4}$	13	11 $\frac{3}{4}$	5	1	5 $\frac{1}{2}$	2 $\frac{1}{2}$	24	16
12	18 $\frac{1}{2}$	8	13	15 $\frac{1}{2}$	14	6	1	6 $\frac{1}{2}$	3	24	16
14	21 $\frac{1}{2}$	9 $\frac{1}{4}$	15 $\frac{1}{4}$	18 $\frac{1}{2}$	16 $\frac{1}{2}$	7 $\frac{1}{2}$	1 $\frac{1}{2}$	7 $\frac{3}{4}$	3 $\frac{1}{2}$	24	16
15	23	10	16	19 $\frac{1}{2}$	17 $\frac{1}{2}$	7 $\frac{1}{2}$	1 $\frac{1}{2}$	8 $\frac{1}{4}$	3 $\frac{3}{4}$	24	16
16	24 $\frac{3}{4}$	11	17 $\frac{1}{2}$	20 $\frac{3}{4}$	18 $\frac{3}{4}$	8	1 $\frac{1}{2}$	9	4	24	16
18	27 $\frac{3}{4}$	12	19 $\frac{1}{2}$	23 $\frac{1}{4}$	21	9	1 $\frac{1}{2}$	9 $\frac{3}{4}$	4 $\frac{1}{2}$	22	20
20	31	13 $\frac{1}{2}$	21 $\frac{1}{2}$	26	23 $\frac{1}{2}$	10	2	11	5	22	20
24	37	16	26	31	28	12	2	13	6	22	20
30	46 $\frac{1}{2}$	20	32 $\frac{1}{2}$	39	35	15	2 $\frac{1}{2}$	16 $\frac{1}{4}$	7 $\frac{1}{2}$	20	20
36	55 $\frac{1}{2}$	24	39	46 $\frac{1}{2}$	42	18	3	19 $\frac{1}{2}$	9	20	20
42	64 $\frac{3}{4}$	28	45 $\frac{1}{2}$	54 $\frac{3}{4}$	49	21	3 $\frac{1}{2}$	23	10 $\frac{1}{2}$	20	20
48	74	32	52	62	56	24	4	26	12	20	20
54	83	36	58 $\frac{1}{2}$	70	63	27	4 $\frac{1}{2}$	29 $\frac{1}{2}$	13 $\frac{1}{2}$	20	24
60	92 $\frac{1}{2}$	40	65	77 $\frac{1}{2}$	70	30	5	32 $\frac{1}{2}$	15	18	24
66	102	44	71 $\frac{1}{2}$	86	77	33	5 $\frac{1}{2}$	36	16 $\frac{1}{2}$	18	24
72	111	48	78	93	84	36	6	39	18	18	32

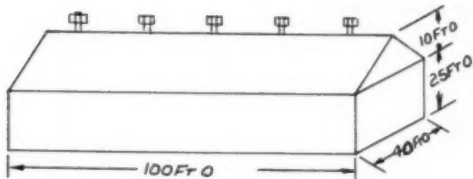
Stationary Roof Type Ventilator

HUGH B. REID
Detroit, Mich.

If N = Number of roof ventilators,
 V = Volume of air per ventilator per minute
 from table below,
 Ch = No. of air changes per hour in room,
 C = Cube of room,

$$\text{then } N = \frac{C \times Ch}{V \times 60}$$

Example:
$$\frac{120,000 \times 6}{2,400 \times 60} = 5 \text{ Ventilators}$$



Estimate the number and size of gravity type ventilators required to give 6 changes per hour to the building shown.

The Following Is a Step-By-Step Analysis:

Step 1: Volume of building = $100 \times 40 \times 25$ Plus

$$\frac{100 \times 40 \times 10}{2}$$

$$\begin{array}{rcl} 100 \times 40 \times 25 & = & 100,000 \\ 100 \times 40 \times 10 & = & 20,000 \\ \hline & & 2 \quad 120,000 \text{ cubic volume of building} \end{array}$$

Step 2: Volume of building multiplied by number of changes required equals cubic feet per hour of air to be exhausted from building.

$$\begin{array}{rcl} 120,000 \times 6 & = & 720,000 \text{ cfh} \\ \text{cfm} = \frac{720,000}{60} & = & 12,000 \text{ cfm} \end{array}$$

Step 3: The building is divided lengthwise into 5 20 ft bays.

$$\text{Volume per bay} = \frac{12,000}{5} = 2,400 \text{ cfm}$$

Step 4: If the average wind velocity is 4 miles per hour and the temperature difference is 10 F, refer to the capacity table to find the one that will best provide the necessary 2,400 cfm, with similar conditions of temperature difference, wind velocity per hour and required height of stack. It will be seen that the size falls between a 30 and a 36 in. with a 40 ft stack requirement for a 10 F temperature difference.

The table at the right contains the exhaust capacities of roof type stationary ventilators. It makes it possible to find the cfm per ventilator under different wind conditions.

Diam. of Ventilator Dia. in Inches	Temp. Diff.	Height of Ventilator Above Roof Intake. Ft.	Wind Velocity. Miles per Hour	
			4	10
12	10°	20	216	361
		40	267	411
	30°	20	304	449
		40	391	536
18	10°	20	489	816
		40	602	929
	30°	20	686	1,013
		40	882	1,209
24 to 30	10°	20	868	1,449
		40	1,069	1,650
	30°	20	1,219	1,800
		40	1,567	2,148
30 to 36	10°	20	1,952	3,259
		40	2,405	3,712
	30°	20	2,743	4,050
		40	3,521	4,828
36 to 54	10°	20	3,471	5,793
		40	4,276	6,598
	30°	20	4,878	7,200
		40	6,263	8,585
54 to 72	10°	20	7,809	13,029
		40	9,619	14,839
	30°	20	10,974	16,194
		40	13,986	19,306

Sheet Metal Subcontracting For National Defense

ERNEST E. ZIDECK

With the accent being put on mobilization of American industry for defense, the sheet metal shop may soon be called upon to convert to war production. Here are some valuable tips on planning and executing of war contracts.

SUBCONTRACTING in the sheet metal field for national defense embraces work and installations for military construction, factories doing war work, and other buildings converted to, or erected for, purposes of national defense. It also reaches into parts manufacture for aircraft, shipbuilding, transport facilities in general, and into construction of components of weapons, and products for use by the armed forces at home and overseas. In spite of the great variety of work and products in this category, all of it is labeled steel metal work and done by sheet metal tools and machines, with application of methods of the sheet metal working industry. Virtually all of this production can be done in the average sheet metal shop. But, as demand for items or parts is usually pressing, one of the requirements is that delivery be on time. The other major requirement is that the work be made accurately according to blue prints and specifications.

Timing Essential

Delivery on schedule is essential when small component parts are needed in the assembly of larger units. The work of assembling units stops completely if only one small part is lacking. The various parts must fit precisely in assembly. They may be made in a number of shops, widely separated and accuracy in following the specifications is the only guarantee that the products of different shops will fit together in assembly. Thus, any sheet metal shop entering into subcontracting must first of all ascertain whether it will be able to deliver on schedule and work to exact dimensions. A subcontract is worthless if the shop cannot produce to these requirements.

In this production all product design, modification, and material specifications emanate from branches of the armed forces. But these directives say what is to be produced, they do not say how it is to be produced. The how is left to the contractor. The armed forces may make available the materials, machines, and buildings for production. The contractor himself must determine which tools and facilities he needs.

Vast Organization

Anyone interested in subcontracting of this nature must also take into account that the armed forces designing, modifying, specifying, and directing is an organized operation. Innumerable wheels are turning each in its own sphere. Blue prints and specifications released to contractors by this organization are the accumulated work of hundreds of technicians, engineers, draftsmen, and specification experts and writers. Whatever appears in the specifications must be done. The slightest deviation would upset the overall calculations.

It was stated above that there is nothing in ordnance sheet metal work which would be strange to a sheet metal mechanic, or hard to produce in a reasonably well-equipped sheet metal shop. This is true in view of the physical aid extended to the contractor by the armed forces or government agencies. Whatever the contractor requires to speed production will be made available to him.

Engine Flap

An example from World War II production may bring this out. The Navy Corsair carrier-based fighter has an engine ventilating diaphragm in which flaps operate on

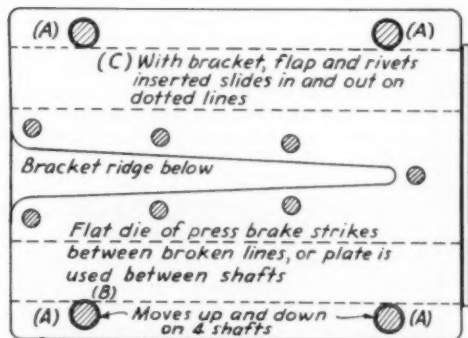
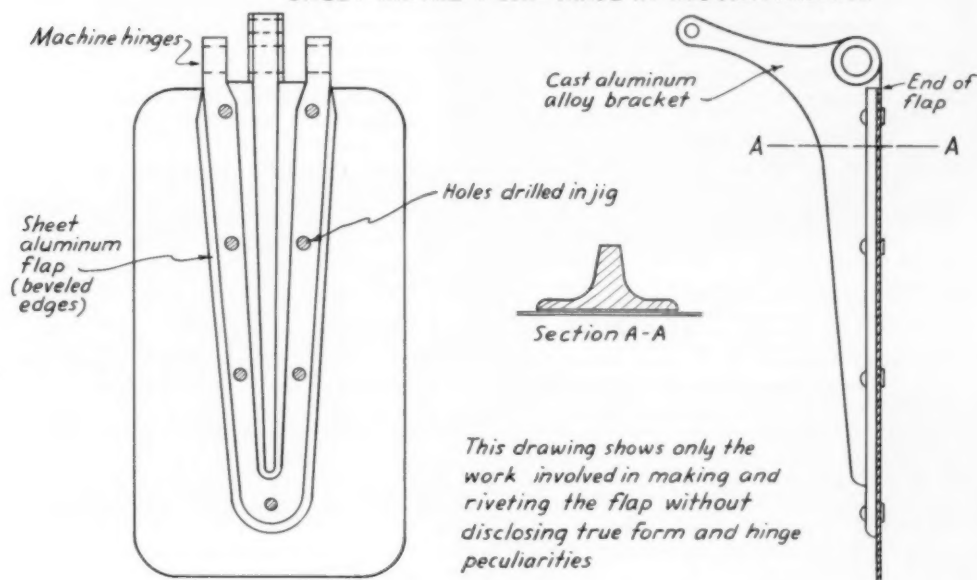
hinges. These flaps are made of sheet aluminum and have rounded corners, with special hinges riveted to the metal. A small sheet metal shop in Connecticut secured a contract for making the flaps and riveting the hinges. Three firms were building the plane at the time. This subcontractor was required to furnish enough flaps for all three. Altogether, about 400 of the flaps were to be delivered each day. As it was impossible to make this number by hand, the contractor decided on two things: 1) a press and die-set for blanking the flaps, complete with rivet holes; 2) several production

fixtures. One type of fixture held the hinges on the flap and the rivets in position for riveting. Another was used for assembly and inspection of the flaps was done in a modified fixture.

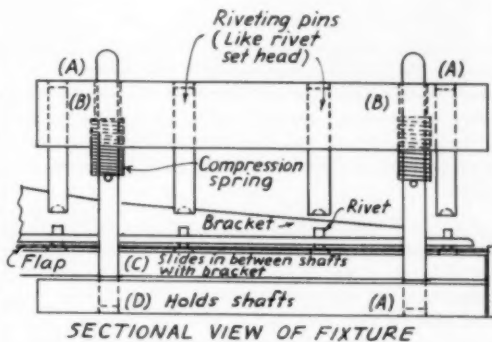
Tools Lacking

This particular shop used squaring shears to shear the metal into strips of blanking. A small press brake did the riveting operation. It had tools and facilities for production, crating, and shipping. The shop did not have the necessary blanking press, die-set and as-

SHEET METAL FLAP MADE IN SUBCONTRACTING



PLAN, FIXTURE FOR RIVETING IN PRESS BRAKE



SECTIONAL VIEW OF FIXTURE

sembly fixtures. The press was made available to the contractor. The die-set was ordered from a die shop. A mechanic in the shop experimented with a practical fixture for the assembly and riveting operations.

Certain Duties

From the above example it is clear that the subcontractor must: a) study the particular part for which he contracts; b) devise means of production to enable him to deliver the product in required numbers, on time and to exact specifications. A subcontractor seldom contracts for more than one item at a time. Many parts needed in aircraft, marine construction and other ordnance work are much simpler than the flap mentioned. Often the parts are merely drilled strips or tapering panels used in engine cowlings. A press brake can be used for quantity production of a great variety of parts usually subcontracted to small shops. The customary sheet metal shop equipment can be adapted easily to this type of production.

Ammunition Boxes

Another example of work that the sheet metal shop can do is the ammunition box of light terne plate that was made for overseas shipment. These boxes were fabricated, joined with seams, and the seams soldered. The box lid was designed to be soldered on after the box was loaded. One shop making the boxes required

only a small squaring shears, a bar folder, and a small press brake. A shallow tank was made to hold molten solder. The seams of the boxes were dipped in flux and then into molten solder. The boxes were tested in a water tank to determine their tightness.

Foresight and planning are the most important factors in subcontracting work. Any sheet metal shop can keep profitably busy during emergency or wartime conditions if it carefully selects the type of work that it wants to do. If the shop does not take on a job that it is unable to handle the chances for success are greatly improved.

Planning Vital

Once the decision has been made as to the pieces or product that is to be manufactured, the planning phase becomes important. Many shops are not accustomed to thinking in terms of mass production or high volume. Most frequently war production is on a high volume basis. To secure this volume it is necessary to obtain the proper machinery and equipment. Light gauge sheet metal work lends itself to mass production and many contractors who became familiar with it in the last war continued in that field later on.

The vital thing to remember in the matter of war work is that it can keep the shop going during difficult times and may provide experience for branching out into new fields later on.

The New Fairless Works

RESPONDING to America's call for more steel to be used in the defense of democracy, Irving S. Olds, chairman of the board of United States Steel corporation, has announced the details of what is believed to be the largest single expansion project ever undertaken by any steel company in the history of the nation — a new, wholly-integrated steel plant near Morrisville, Pa., which will have the capacity to produce 1,800,000 ingot tons of steel a year for national defense and essential civilian uses.

To be named the Fairless Works, in honor of Benjamin F. Fairless, president of United States Steel, the new mill will start rising on the banks of the Delaware River, opposite Trenton, N. J., early next spring and is scheduled for completion by the end of 1952. Within six to twelve months after construction work begins the first finished steel products are expected to start rolling out of the plant, which, when completed, will produce a wide range of finished products, including bars, standard steel pipe, wire rods, hot and cold rolled sheets and strip, and tin plate.

Fairless Works is the largest element in a defense expansion program authorized by United States Steel since the outbreak of war in Korea last June, which upon its completion will add more than 4,000,000 tons to the annual steel capacity of U. S. Steel's various facilities. The natural area for distribution of the products of the Fairless Works is the middle Atlantic and New England mar-

kets, Mr. Olds declared. Being located on tidewater, the new mill can also be used for export shipments.

In announcing the action of the board of directors, authorizing immediate construction of the Fairless Works, Mr. Olds said:

"Shortly after the communist invasion of South Korea last June, United States Steel decided that the exigencies of the national situation required it to go forward at once with its long-contemplated project of an eastern seaboard steel mill. The board of directors requested the engineering staff of United States Steel to prepare and submit plans and estimates of cost for a complete steel plant, the building of this large plant to be undertaken promptly, if it should appear that the military and civilian needs of the nation in these days of national emergency required such action.

"The increasing seriousness of the international situation since that time has made it evident to the directors that a steel plant with an annual ingot capacity of 1,800,000 tons should be built as promptly as possible. The government was advised of this decision, and certificates of necessity covering a major part of the estimated cost of these facilities have been issued in Washington pursuant to the Act of Congress on this subject.

"Orders for important items of equipment and machinery for the new mill are being placed. Actual construction of the plant itself will begin as soon as possession of the complete plant site is obtained in about two months."

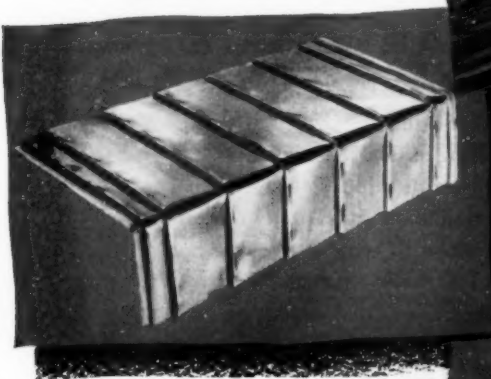
REVERE COPPER

for long-lasting
sheet metal
construction

Revere Sheet and Roll Copper have proved their ability to give longer service per dollar of cost—as roofing, gutters, flashings, expansion joints, etc.



Revere-Keystone Interlocking Thru-Wall Flashing* provides lasting protection against seepage and leaks. Easily installed, it insures positive drainage. Bonds in all three directions.



Revere-Simplex Reglet System* for flashing spandrel beams offers substantial savings in cost on many jobs. Of the closed slot type, it requires no soldering, no fillers, no caulking, no wedging.

If literature describing these products is not already in your files, please let us know and we shall send copies to you... as well as a copy of Revere's "Master Specifications for Sheet Copper Construction."

These Revere products are available for prompt delivery from leading sheet metal distributors throughout the United States. A Revere Technical Advisor will always be glad to consult with you, without obligation.

*Patented

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N.Y.
Sales Offices in Principal Cities, Distributors Everywhere.

REVERE COPPER AND BRASS INCORPORATED
230 Park Avenue, New York 17, N. Y.

Please send me a copy of each piece of literature which I have checked below:

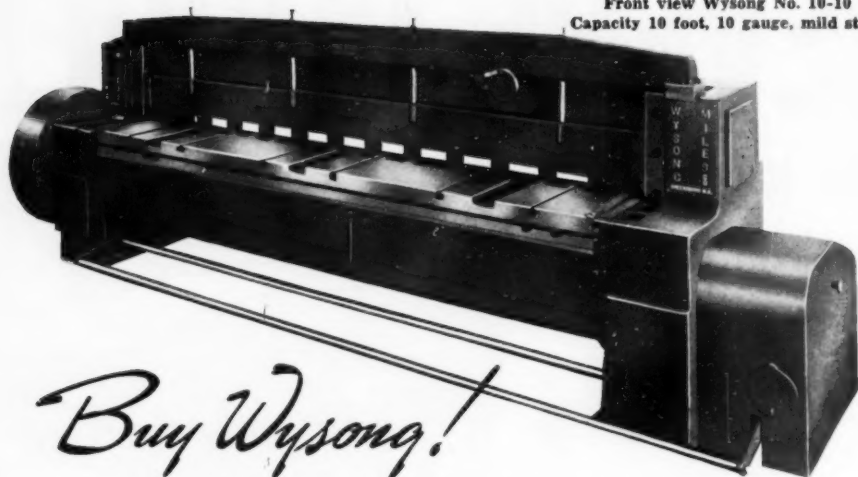
- ☐ Revere-Keystone Interlocking Thru-Wall Flashing
- ☐ Revere-Simplex Reglet System for Flashing Spandrel Beams
- ☐ Master Specifications for Copper Roofing and Sheet Metal Work

Name.....

Firm.....

Address.....

Front view Wysong No. 10-10
Capacity 10 foot, 10 gauge, mild steel.



Buy Wysong!

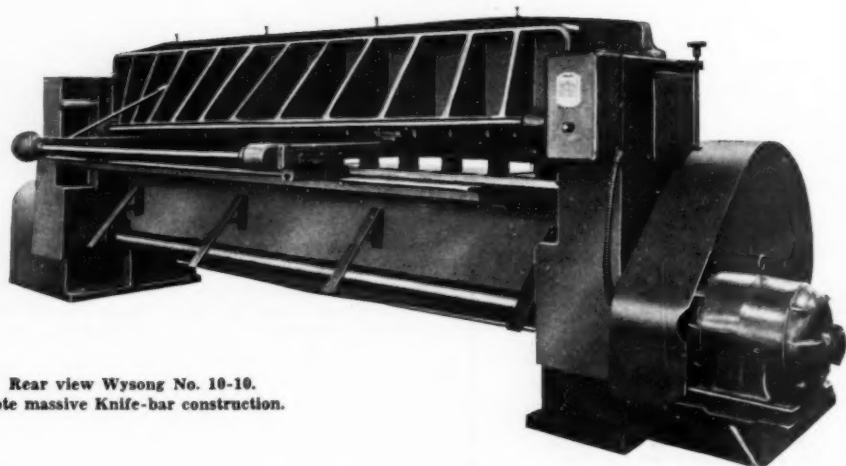
FOR TOP SHEAR VALUE

Time tested rigid construction that stands up under constant usage. Labor saving features for quick and easy positioning of stock. Shearing is fast, safe and accurate. Each shear is shipped completely equipped and ready for capacity operation. Compare Wysong, feature for feature. Then Buy Wysong.

See your dealer or write for catalog No. 44. Wysong builds a complete line of Air, Foot and Motor powered squaring shears for the sheet metal fabricator.

WYSONG and MILES CO

GREENSBORO, NORTH CAROLINA



Rear view Wysong No. 10-10.
Note massive Knife-bar construction.



ASSOCIATION ACTIVITIES



Indoor Comfort Conference Schedule

THE NATIONAL WARM AIR HEATING and Air Conditioning Association announces that 33 *Indoor Comfort* Conferences have been scheduled during the first six months of 1951. As with previous conferences sponsored by the association, the 1951 classes will bring to those attending first-hand information about the results of 33 years' continuous research, plus the results of the surveys conducted by the Field Investigation Committee, and the opportunity to gain new ideas from the experiences of successful heating men throughout the country.

Guy A. Voorhees, technical secretary of the association, will continue to instruct the 1951 conferences and is currently preparing and revising the instructional material to bring it completely up-to-date. Of special

interest will be the new short form for estimating jobs which will be introduced at the conference by Mr. Voorhees. "This new form," states Mr. Voorhees, "is a shorter, easier and faster method of estimating a job. It is accurate and is based directly on the manuals published by the association."

The instructional material of the two-day heating school will lead off with a short review of the basic principles for warm air heating and the methods of figuring heat loss. The greatest portion of the class time will be devoted to the discussion of heating systems for low-cost houses. Covered in this instruction will be the design and installation of winter air conditioning systems that provide *Indoor Comfort* in basementless

(To page 186)

Coming Events — 1951

Jan. 21-25—National Association of Home Builders, 7th Annual Convention and Exposition. Stevens and Congress Hotels, Chicago, Ill. E. M. Spiegel, Convention Chairman, Passaic, N. J.

Jan. 22-25—American Society of Heating and Ventilating Engineers, Annual Meeting. Belden Stratford Hotel, Philadelphia, Penn. A. V. Hutchinson, Secretary, 51 Madison Ave., New York, N. Y.

Jan. 22-26—10th International Heating, Ventilating and Air Conditioning Exposition, under auspices of American Society of Heating and Ventilating Engineers. Commercial Museum, Philadelphia. International Exposition Co., Grand Central Palace, New York City.

February 1-2—Sheet Metal and Warm Air Heating Contractors Association of Indiana, Inc., 33rd Annual Convention. Hotel Severin, Indianapolis. Frank E. Anderson, Secretary, 439 S. 17th St., Terre Haute, Ind.

Feb. 12-14—Sheet Metal Contractors' Association of Wisconsin, Inc., 36th Annual Convention. Schroeder Hotel, Milwaukee, Wis., Irving F. Kanitz, Executive Secretary, 225 E. Michigan St., Milwaukee.

March 5-6—Ohio Sheet Metal Contractors' Association. Annual Convention, Columbus,

Ohio. Wm. C. Lumm, Secretary, 2512 Albion St., Toledo, Ohio.

March 11-14—New York State Sheet Metal, Roofing, and Air Conditioning Contractors Association, Annual Convention. Hotel Utica. Clarence Meyer, Secretary, 567 Genesee St., Buffalo, N. Y.

March 19-22—Forced Warm Air Conference, 20th Annual, Michigan State College, East Lansing, Mich. Chairman, Dean Lorin G. Miller. Fee, \$22.00

March 30-31—Sheet Metal, Air Conditioning and Roofing Contractors' Association of Pennsylvania, Annual Convention, Lancaster, Penn. Charles Luppold, Convention Chairman, Reading, Penn.

April 2-4—Sheet Metal Contractors Association of Illinois, Inc., Annual Convention. Jefferson Hotel, Peoria, Ill. W. R. Shaw, Secretary, 695 E. State St., Jacksonville, Ill.

April 2-6—National Oil Heat Exposition and Annual Convention, Navy Pier, Chicago, Ill. Oil-Heat Institute of America, 6 East 39th St., New York, N. Y.

April 10-12—Michigan Sheet Metal, Roofing, Heating and Air Conditioning Contractors' Association, 40th Annual Convention. Pantlind Hotel, Grand Rapids, Mich. N. J. Biddle, Secretary, 3035 E. Grand Boulevard, Detroit, Mich.



Dan Schmidlin

All branches of the warm air heating industry, including Indoor Comfort dealers, participated in the National Warm Air Heating and Air Conditioning Convention. The achievements of the past year were discussed as well as the possibilities of the future.



Hugh Thompson

Warm Air Industry Faces Uncertain Future After Record-Breaking 1950

THE 37TH ANNUAL CONVENTION of the National Warm Air Heating and Air Conditioning Association held in Hotel Statler, St. Louis, December 5-6, convened in an atmosphere of apprehension over anticipated effects on the industry of a new world conflict.

Paradoxically, it met also in the flush of a year in which the industry achieved outstanding advancements, for warm air heating had hit its stride in public acceptance in the postwar automatic heating market.

Both the abundant attendance and the consensus of the delegates substantiated the contribution of the association's far-reaching programs in generating this acceptance. Projection of the industry's shipments in the first half of the year pointed to a conservative forecast of a record breaking yearly production pace of 1,000,000 units. Before Korea, this was heralded as a prospective high water mark in furnace sales on a dealer front that was being propped by a thriving construction and replacement market for automatic warm air heating. While this prospective record was being chalked up, the association's headquarters staff in Cleveland was running interference which proved effective in blocking out opposition.

In selecting St. Louis for the 37th annual convention, President Clarence S. Franke, a St. Louisan, departed from a custom established in

recent years when the annual meetings have been held in the headquarters city of Cleveland. A total of 583 representatives and guests from all branches of the warm air heating industry registered at the Statler to set a new high in attend-



George Smith

ance records. Expectations of local dealer attendance materialized into well-attended sessions, overflow lunches, and a subway-packed cocktail hour.

Opening Session

Managing Director George Boeddener, presiding during the opening session, presented President Clarence S. Franke who opened the convention by reporting on the progress of the association's activities under his administration as chief executive. He pointed to the industry's record in 1950 as indicative that automatic heating has reached mass mar-

ket proportions. He recognized the impending implications to the industry of another war. The resignation of William D. Redrup, chairman of the Installation Codes Committee, was announced with regrets by the president. Lorin G. Miller, Dean of Engineering, Michigan State College, was named as successor to the retiring chairman who will continue to serve the association as its first vice president.

While complimenting the headquarters staff in Cleveland, for its efforts in coordinating and publicizing the activities of standing committees, the president acknowledged the contributions of the individual members of these committees in the advancement of the association and the industry.

George Smith, president of the local chamber of commerce, welcomed the convention to St. Louis and assured the delegates they would find it a friendly city. He revealed that approximately 5,000 St. Louisans are engaged in the heating and air conditioning industry, serving a \$20 million local market. He forecasted a dynamic market for warm air heating in 1951 despite a prospective shrinkage in national residential construction from 1,300,000 units in 1950 to 850,000 in 1951.

Tyler S. Rogers, Owens-Corning Fiberglas Corporation, discussing insulation as a factor of heating and air conditioning, appealed for co-

ordination between the insulation and heating industries. In establishing the inter-dependency of the two industries, the speaker described a ceiling panel heating system in his own home.

Warm air flows through a suspended ceiling space. The floor is a concrete slab on the ground, without direct heat. The system has proved to be satisfactory, it provides uniform distribution, it responds to weather changes. He has observed that drafts are non-existent and has found only 4 F temperature difference between floor and ceiling.

But, he continued, it lacks ventilation. After describing how a room fills with haze from people smoking, Mr. Rogers commended the association's development and research of perimeter warm air heating which retains the comfort advantages of panel systems and also provides circulation of clean, tempered air.

Edge Insulation

He cautioned his audience on the importance of insulation at the edge of floor slabs where temperature differences are greater than that of the outside walls. To insure heating satisfaction, he suggested that heating contractors installing perimeter systems should consider selling the insulation for the underfloor ducts.

"In earlier days", he said, "you had no great interest in insulation. The more heat a building required, the larger the unit you could sell. Those days are gone forever. Now you must conserve heat — for the sake of your own business. It is



Tyler S. Rogers

already your acknowledged responsibility to see that your furnace unit is insulated against wasteful heat losses. It seems to me logical for you to extend this responsibility to the ductwork that distributes heat — whether the duct be buried for perimeter heating, or exposed in cold attics, basements, or outside walls for the more conventional systems.

"I do not expect you to take responsibility for controlling the insulation of the building, or the use of double glazing at windows and doors, or the use of weatherstripping to reduce drafts. You can only help yourself here by recommending adequate insulation so that your unit will show more than satisfactory performance in terms of fuel costs.

"Even in your huge replacement



George Underwood

market these ideas are still valid. An old house or building that has not been insulated can offer a market for a smaller unit if the excessive heat losses have been reduced. So long as you cannot make all the units you would like to produce, (and if I am right that the best interests of your industry will be served by selling as many units as you can produce with your metal) then you can make friends and sales capital by promoting more efficient furnaces combined with insulation that stops wasteful losses.

"If you agree with my reasoning I can return to my opening assertion. You will remember that I said that the future profits of your business, particularly under defense limitations, will be related to the degree of responsibility you accept for see-



John T. Anderson

ing that the buildings you equip are properly insulated.

"I believe this to be true. But the job is not yours alone. It is a task in which the insulation industry has an even larger stake. Working together we can benefit each other and all our customers. It's a good way to keep up the American standard of living under a defense economy."

Government Contacts

Thomas I. Byrd, chairman of the association's Task Group, Warm Air Industry Emergency Committee, reported on his committee's contacts with the National Production Authority in Washington and introduced George Underwood, Chief of the Plumbing and Heating Section, who outlined the organization and operation of his section. "The heating section," he said, "will be well-fortified with counselors and advisers who will have your interest at heart." In describing M orders issued by NPA, Mr. Underwood defined them as merely stop-gap affairs. They are preliminary to severe curtailments that are expected during the first quarter of 1951. He noted that DO ratings may be applied only to war orders and that there are no priorities now for civilian use.

John T. Anderson, manager, commercial research department, Armco Steel Corporation, discussed building forecasts for 1951. In his talk Mr. Anderson pointed out the general picture for 1951 is an inflationary one, with the government stepping in with measures designed to control both inflation and raw material sup-

ply. Considering all types of construction, residential, public, and industrial, he estimated that the total will decline about 10-15 per cent next year. Using these figures, he then projected a demand for 713,000 furnaces in 1951. He observed that the housing shortage is not yet completely relieved and that we will witness a continuation of conditions that build up a further shortage in the future.

An address by Dr. Arthur H. Compton, Chancellor of Washington

Home Bureau, Cleveland Electric Illuminating Company, reported on this company's sales promotion program which has aided the warm air heating industry in increasing the sale of winter air conditioning systems.

Gas Supply

R. J. Vandagriff, General Sales Manager, Laclede Gas Company, revealed that 33 major pipeline companies are planning expansion of their facilities in order to take care

of the demand for gas. He stated that the recoverable supply of natural gas is almost inexhaustible, exceeding 500 trillion cubic feet. That, he said, is far beyond our conception.

Publicity

Marion I. Levy, chairman of the Publicity and Merchandising Committee, reported on the activities of the association's consumer and industrial publicity programs. With the use of slides, Mr. Levy outlined the various ways the association is



George Boeddener



Dean L. G. Miller



Thomas I. Byrd

University and well-known physicist, was featured at the conclusion of the Tuesday noon luncheon. Dr. Compton spoke on the subject Contrast of East and West. Reporting that peace and unity between East and West is impossible without complete understanding, he outlined a few of the major differences drawn from his personal travels and experiences.

The afternoon session on Tuesday was opened with the nomination and election of officers and members to the Board of Trustees. H. P. Mueller, past president of the association and chairman of the Nominating Committee, presented the recommendations of his committee. All officers were nominated and unanimously elected for a second term.

Robert V. Main, manager, Electric

Officers For 1951

C. S. Franke, St. Louis, Mo.....	President
W. D. Redrup, Huntington, Ind....	1st Vice President
C. B. Phillips, Toledo, Ohio.....	2nd Vice President
Geo. Boeddener, Cleveland, Ohio...	Managing Director

Trustees

R. M. Cook.....	Garwood, N. J.
H. G. Cross.....	Minneapolis, Minn.
H. F. Curtis.....	Cleveland, Ohio
G. W. Denges.....	Cincinnati, Ohio
M. I. Levy.....	Cleveland, Ohio
F. L. Meyer.....	Peoria, Ill.
H. F. Randolph.....	Utica, N. Y.
L. S. Redford.....	Saginaw, Mich.
Atlee Wise.....	Akron, Ohio

publicizing all developments in warm air heating to the public and to the industry.

Consumer publicity developed by the staff in Cleveland is not confined to newspapers, but also includes shelter magazines, building and loan periodicals, and architectural publications. On the warm air industry front, technical and promotional material is released through trade business papers and in regularly published bulletins which are distributed to the membership. Mr. Levy noted that the association has established itself among editors as the authoritative voice of the industry.

A panel discussion on selling and salesmen's compensation was enthusiastically received by those attending the Wednesday morning session.



Scenes at the cocktail hour

Hugh Thompson, Thompson Heating Corporation, Cincinnati, Ohio, observed that many times during his 39 years in the heating business there have been good times and bad times, but in the final analysis dealers who are sales minded, survive. He re-

minded his listeners that it is necessary to tell the American people what we have to sell or someone else will get the business.

In the opening words of his talk, Dan Schmidlin, Schmidlin Brothers, Toledo, Ohio, astounded his audience

with the words: "I have no sales problems. I have not had any for 16 years." He then went on to explain his sales compensation plan that has worked extremely well. "I pay a salesman for what he does:

(Please turn to page 188)



Panel members answer questions from the floor.



A. M. Vorys

National Heating Wholesalers Association Sets Records For Membership, Interest

THE FOURTH ANNUAL MEETING of the National Heating Wholesalers Association held in Hotel Sheraton, St. Louis, December 6-7, was marked by record attendance, well-attended sessions, and informative discussions.

Fred Wheeler, chairman of the Membership Committee, in a pre-convention announcement, reported that 1950 had been a year of outstanding association growth. Efforts of his committee in appealing for support of

heating wholesalers resulted in a surge in membership that doubled the previous year's total. Many new members from across the country took advantage of the opportunity to attend despite the inconveniences caused by a rigorous preview of an old-fashioned Midwest winter.

Business sessions for members only occupied the first day, Wednesday, during which reports by officers, trus-



tees, and standing chairmen were made and the program for the new year was developed.

The first general session open to members and guests was gavelled to order by Charles Bird, president, who introduced George T. Underwood, Chief, Plumbing and Heating Section, National Production Authority, Washington, D. C. Mr. Underwood explained the organizational structure of the Plumbing and Heating Section by diagram which included advisory committees from the heating industry itself. In staffing these committees, the section will follow NPA policies in seeking personnel who understand the problems of the industry. He appealed for cooperation as the mobilization program gets underway. As indicative of the organizational job ahead, Mr. Underwood noted that his section consisted of two employees compared with 250 in the War Production Board when fully staffed.

The second speaker of the morning session, Charles H. Burkhardt, heating editor, *Plumbing and Heating Wholesaler*, discussed trends in the heating industry and pointed to the increasing ratio of warm air units over boilers as natural gas moves into an area. In the Midwest where both gas and warm air have become established in public acceptance he cited a 7 to 1 ratio in favor of warm air over wet systems. A conclusion reached from study of several major sections indicates that oil is favored as a fuel for wet heating systems and natural gas for warm air heating.

The morning session was concluded with a discussion by E. R. Kochheiser, past president, National Stationers Association.

A panel representing manufacturers and wholesalers was assembled for the afternoon session to discuss business problems submitted previously in writing or orally from the floor.

The first major questions concerned standardization of input for gas furnaces, blowers, and register classifications.



Glenn Ashburn



Al Fredrich

Frank J. Nunlist, L. J. Mueller Furnace Company, was called upon to explain the manufacturers viewpoint on the furnace question. His reply was prefaced by the statement that manufacturers first want to build the kind of equipment that can be sold and that in most instances they attempt to adjust the range of input according to demand.

Analysis of the inputs of 1,185 gas fired furnaces indicate that 641 fall in 10 rating groups. For example, 127 of these units are rated at 100,000 Btu input. Mr. Nunlist also commented on the different models of gas furnaces available in the industry and pointed out that 241 units fall into 10 major model classifications.

In his opinion a large degree of simplification has been accomplished through competition under free competition and suggested further standardization could come only through standardization of demand.

Standardization

A question inquiring into the prospects of standardization on the size of blower motor pulleys and shafts was submitted to Thomas I. Byrd, Lau Blower Company. He said that blower manufacturers have standardized on a 3 in. variable speed motor pulley, but differences in shaft diameters arise from a conflict in the motor

(Please turn to page 248)



ALBERT C. ROETH, Jr.

D.R. QUINN

E.A. EICHENBERGER

CHARLES J. PEARSON

Association Activities —

(From page 179)

houses. Time will also be spent in discussion of the proper location of registers and return air intakes to put the heat where it will give the most comfort.

A listing of the conferences scheduled (One has already been held in Indianapolis) is given below along with the names of the conference chairmen:

- January 18-19—Peoria, Illinois
Charles Raper, The Meyer Furnace Co.
- January 22-23—South Bend, Indiana
Dick Young, Young Heating Supply, Inc., 416 S. William St.
- January 29-30—Youngstown, Ohio
J. H. Baum, J. H. Baum Heating Co., 6400 Southern Blvd.
- February 1-2—Columbus, Ohio
Newt T. Hess, Vorys Bros., Inc., 63 E. Goodale St.
- February 5-6—Memphis, Tennessee
J. D. Holden, A-T-M Gas Equipment Co., 1132 Exchange Bldg.
- February 9-10—Birmingham, Alabama
Geo. F. Wheelock, The Geo. F. Wheelock, 3017-25 Second Ave.
- February 13-14—Atlanta, Georgia
Chas. M. Farrar, Warm Air Heating Contractors Ass'n. of Atlanta, Inc.
- February 16-17—Knoxville, Tennessee
W. A. Simpson, Bondurant Bros.
- February 19-20—Charlotte, North Carolina
Frank Mayhew, Metal Service Corporation, 2508 Lucena Ave.
- February 23-24—Huntington, West Virginia
Claude A. Conley, 918 Third St., West
- March 5-6—Houston, Texas
D. M. Mills, F. J. Evans Engr., A. G. C. Bldg., Gray & Crawford
- March 8-9—Oklahoma City, Oklahoma
Louis Loeffler, Jr., Federal Supply Co., 120 E. Main St.
- March 12-13—Tulsa, Oklahoma
F. M. Thomas, Thomas Engr. Co., 1325 E. 35th Place
- March 19-20—Kansas City, Missouri
W. R. Cameron, Missouri-Kansas Supply, 1725-31 Locust St.
- March 22-23—Salina, Kansas
Jim McKim, The Salina Supply Co.
- March 30-31—Boston, Massachusetts
T. F. Donahue, Jr., Herrick Co., 352 C St., South Boston
- April 2-3—New Haven, Connecticut
B. L. Fay, The Norwalk Airconditioning Corp., 138 Water St., S. Norwalk
- April 5-6—Long Island, New York
C. W. Rand, Home Crafts Co., Floral Park, New York

- April 9-10—Philadelphia, Pennsylvania
John E. Phillips, Stelwagon Mfg. Co., 19th & Washington Ave.
- April 13-14—Baltimore, Maryland
W. E. Kingswell, W. E. Kingswell, Inc., 4020 Georgia Ave., N. W. Washington, D. C.
- April 17-18—Utica, New York
I. C. Barber, International Heater Co., 101 Park Ave.
- April 26-27—Rockford, Illinois
E. D. Mott, Mott Bros., 907 South Main St.
- April 30-May 1—Milwaukee, Wisconsin
Fred J. Engler, Milwaukee Stove & Furnace Repair Co., 323 West Juneau Ave.
- May 3-4—Minneapolis, Minnesota
Stuart A. Smith, Waterman-Waterbury Co., 1121 Jackson St., N. E.
- May 7-8—Billings, Montana
Harry Hunt, Midland Implement Co., Heating Division
- May 11-12—Omaha, Nebraska
L. C. Norton, A. Y. McDonald Mfg. Co., 1201 Dodge St.
- May 14-15—Des Moines, Iowa
John C. Rehmann, Keith Furnace Co., Dean Ave. at E. 26th St.
- May 21-22—Evansville, Indiana
Roger K. Becker, Ohio Valley Hardware & Roofing Co.
- May 25-26—Fort Wayne, Indiana
Cleo. G. Fox, Fort Wayne Heating & Sheet Metal Contractors Ass'n. 3209 Thompson Ave.
- May 28-29—Detroit, Michigan
E. B. Root, Superior Safety Furnace Pipe Co., 5816-44 Forsythe Ave.
- May 31-June 1—Saginaw, Michigan
B. L. Lange, Wm. A. Lange & Son, 219-221 So. Hamilton St.
- June 4-5—Kalamazoo, Michigan
Glen W. Rynbrand, Glen W. Rynbrand Co., 2107 Schippers Lane

The registration fee for the two-day conference is \$12.50 per student. The fee includes tuition and the cost of all manuals and worksheets that the student will receive for classroom instruction. For further information regarding class location and hotel room reservation, write to the chairman of the conference you plan to attend.

Canadian Chapter Meets

TWENTY-FIVE MANUFACTURER MEMBERS and some associate members were on hand at Quebec City for the 7th Annual Meeting of the Canadian Chapter, National Warm Air Heating & Air Conditioning Association.

H. T. Williams occupied the chair in the absence overseas of President J. P. Thibault. An interesting event at the luncheon was the presentation of a gift of handsome luggage and a scroll to Fred W. Taylor, chapter engineer since 1946 who is severing his con-



Delegates at the convention

nection with the association to engage in private practice. The scroll is inscribed "for outstanding service to the warm air heating industry."

New Officers

Newly elected officers and directors for 1951 are: H. T. Williams, president; J. P. Thibault, vice president; D. S. Fisher; R. V. Millar and F. A. Sheldon. Members of the central office staff spoke on outstanding advances in all activities during 1950—schools, membership, publicity and financial position.

Report on Schools

F. W. Taylor reported that eleven *Indoor Comfort* schools were held in 1950 with attendance of 613, a new record. Forty-three schools have been held since the inception 6 years ago of the Chapter's educational program. Total attendance is 1,896. It was estimated that 30 per cent of those who attended the 1950 schools were repeat students, some attending for the fourth time. T. A. Clark, who will be heading the schools program for the Chapter in 1951, advised that twelve schools will be held from coast to coast, each school of five-day duration as in the past. Bulletins will be issued to the trade from the association offices.

Membership Increases

F. B. Weaver reported advances in all membership divisions. Manufacturer members have increased from 34 at Sept. 30, 1949 to 39 at the present time. Jobber members from 16 to 19 and dealer associate members

from 558 to 738. Total membership of the Canadian Chapter, therefore, is now 896, with further advances expected in connection with the 1951 schools program.

Publicity

F. A. Young, advised under publicity activities that the Consumer Education Program had been stepped up approximately 20 per cent in 1950. The program is designed to: 1) Hold and expand the industry's position in the field of central heating and 2) To make members' sales promotion and advertising programs more effective. Appreciation was expressed for co-operation received from the trade press in "promoting industry-wide morale by a complete information service on school and other activities."



F. W. Taylor receives scroll of honor

Financial Report

C. B. Taylor, managing director of the Canadian Chapter, wound up the presentation of the central office's "1950 Indoor Comfort Story" with information on the financial progress of the organization. He stated that from a deficit of \$350 in 1947, the picture had changed to a surplus of almost \$13,000 in 1950. Almost \$7,000 worth of technical and promotional material was sold by the Chapter office in 1950, up more than \$2,000 over the previous year.

Research Report

G. O. Colborne, chairman of the Technical Advisory Committee, reported on research work being done at Queen's University as follows:

- a) Physical testing of the conventional oil fired conversion furnace is now almost complete. Results show that the equations provided by the parent association in the States for computing rating capacities of such furnaces are sound.
- b) The testing of larger furnaces, that is above a bonnet rating of 200,000 Btu per hour, hand fired coal, stoker fired and oil fired will begin during the present heating season.
- c) The testing of single-purpose, oil fired warm air furnaces will also commence in the very near future.
- d) The testing of furnaces designed specifically to burn wood will be carried out at a later date.

Warm Air —

(From page 183)

\$5 for survey, \$2.50 for presentation, and \$2.50 for a demonstration, a total of \$10. When he does this 10 times he has made \$100. If he makes 10 good, complete surveys, 10 good presentations, and 10 good demonstrations, he will sell heating equipment without any ifs, ands, or buts. Actually, with this plan you pay only straight commission for when the sale is made you deduct the money advanced and pay the salesman any balance due him."

In his report covering the 1951 *Indoor Comfort* Conference program, Guy A. Voorhees, technical secretary of the association, announced that it is intended to keep instructional material sufficiently flexible to permit changes to meet any situation that may arise in business conditions. A new short-cut method for calculating heat losses for estimating purposes

will be presented this year, but he cautioned the method should be restricted to estimating only.

The noon luncheon on Wednesday was in honor of Dean Lorin G. Miller, Michigan State College. This honor was bestowed on Dean Miller in recognition of his unselfish service to the association and to the industry. During the past 19 years Dean Miller has been administrator of the Michigan State College warm air heating short courses and has also been chairman of the association's Technical Education Committee. Following short addresses by H. F. Brundage, Bruce F. McLouth, and E. B. Root: W. D. Redrup presented two pieces of luggage and a briefcase to Dean Miller.

Reports by Chairmen

Reports on the association's programs were made by committee chairmen. C. L. Sapp reported for the Legislative Committee. C. W.

THE CANADIAN CHAPTER of the National Warm Air Heating and Air Conditioning Association has announced its 1951 *Indoor Comfort* educational program, with schools to be held as follows:

1. Toronto, Ont., Jan. 8 to 12 inclusive
2. Hamilton, Ont., Jan. 15 to 19 inclusive
3. Windsor, Ont., Jan. 29 to Feb. 2 inclusive
4. London, Ont., Feb. 5 to Feb. 9 inclusive
5. Vancouver, B. C., Feb. 19 to Feb. 23 inclusive
6. Edmonton, Alta., Feb. 26 to March 2 inclusive
7. Regina, Sask., Mar. 5 to Mar. 9 inclusive
8. Winnipeg, Man., Mar. 12 to Mar. 16 inclusive
9. Ottawa, Ont., Mar. 26 to Mar. 30 inclusive
10. Montreal, P. Q., Apr. 9 to Apr. 13 inclusive
11. Amherst, N. S., Apr. 23 to Apr. 27 inclusive
12. Quebec City, P. Q., Apr. 30 to May 4 inclusive

There are twelve schools in the 1951 program as against eleven in 1950. The course will cover all nine of the association manuals with problem layouts in gravity and forced warm air systems.

T. A. Clark of the Canadian Chapter staff will be in charge of the 1951 educational program. Throughout the schedule he will be assisted by F. W. Taylor, former Chapter engineer, members of the association's Technical Advisory Committee and at some schools by outstanding associate members.

Bulletins will be sent out to the trade well in advance of each school. Information may be obtained by writing the Canadian Chapter, NWAH&ACA, Royal Bank Chambers, Yonge at Deloraine, Toronto 12, Ont.

Nessell for the Field Investigation Committee, Dean L. G. Miller for the Technical Education Committee, F. L. Meyer for the Research Advisory Committee, and W. D. Redrup for the Installation Codes and Application Engineering Advisory Committees.

Research Reports

Concluding the convention program were reports on the association's research activities at the University of Illinois. R. W. Roose, special research associate at the University of Illinois, presented an illustrated progress report of investigation of ventilation air supply to a warm air heating system. Progress report on perimeter heating in research residence No. 3 was presented by M. E. Childs, special research assistant, and J. R. Jamieson presented a progress report on perimeter heating investigation in the floor slab laboratory.

EQUIPMENT DEVELOPMENTS

Oil Fired Furnace 1

Compact oil fired warm air conditioner delivers 100,000 Btu at plenum, is particularly well adapted to ranch type houses where heater space is at a premium and the large heat output is welcome when additional rooms are completed as provided for in most basic unit ranch type homes.

Unit is fully enclosed, of heavy, durable construction. Exterior is of wrinkle gray baked enamel. *Ducane Heating Corp., Lincoln Park, N. J.*



Oil Filter 2

A new oil filter, the Two-Tank-T, with two inlets and one outlet that filters right at the tank, eliminates a tee and elbow and also decreases the amount of copper tubing needed for an installation.

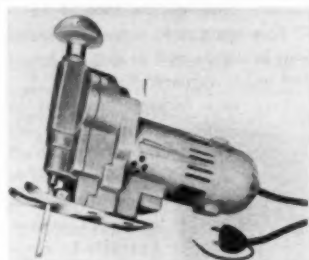
Made of light weight, non-rusting special alloy, easily supported by pipe or copper tubing. Although designed primarily for two tank installation, it can be used on a one tank installation by merely plugging one inlet. If second tank is installed later, it is only necessary to remove plug and connect nipple from other tank valve.

Cartridge is standard size and

(Use Coupon on this Page)

easily removed by unscrewing top bolt. Finished in colorful green body and orange cover.

Robert Barclay, Inc., Chicago, Ill.



Portable Power Tool 3

Whiz Saw model No. 2 is a power packed precision tool that will cut wood, bone, fiber, and other composition materials up to 2 in. thick. Also when equipped with a high speed blade will cut light gauge metals. Can be used as a rip, cross cut, or scroll saw. Light in weight (6¾ lbs.) saw is safe and easy to handle.

Furnished complete with two extra blades.

Forsberg Mfg. Co., Bridgeport, Conn.

Compact Heating Unit . . . 4

Hiboy heating unit for basement-less homes occupies a minimum of floor space. Measures 20 in. wide by 25 in. deep by 57 in. high. Use of a new flange type burner makes for further space economy.

Features include low stack temperature, easy accessibility of parts, and high efficiency in fuel consumption.

The cold air return may be located on any side or in the base of the furnace. Like the lobby and hang-up units, the hiboy is of heavy gauge all steel construction and comes factory assembled. *Turb-O-Tube Furnace, Inc., Buffalo, N. Y.*



Punch Press 5

Model 18B punch press has a 24 in. throat, is designed to handle sheet material up to 48 in. wide.

The rotary turret permits the operator to locate any one of 18 punch sizes almost instantly. Turret rotates to the desired punch size, locks in

MAIL THIS NOW!

We will ask the manufacturer to send full particulars about the products and literature mentioned.

Be sure to circle the items you want.

1-51

Equipment Developments

1	2	3	4	5	6	7	8
9	10						

New Literature

201	202	203	204	205	208	209	210
211							

Manufacturer ☐

Jobber ☐

Dealer ☐

Name

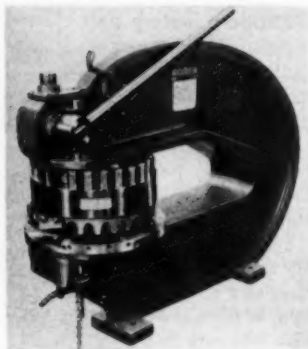
Company

Address

Address: AMERICAN ARTISAN, 6 North Michigan Ave.,
Chicago 2, Illinois

EQUIPMENT DEVELOPMENTS

(Use Coupon on Page 189)



position automatically.

Since dies and punches are accurately pre-aligned, unit insures a mechanically precise and perfect job without manual adjustments. Independent rotation of turret and die plate increases versatility of the punch press and a safety lock prevents damage to the work, punches, or dies if machine is not properly aligned.

Rotex Punch Co., Oakland, Calif.

Compact Gas Furnace . . . 6

New low hiboy furnace, known as Model 19 Superflex, is only 58 in. high. Offers all the space saving advantages of the modern hiboy plus a height which makes possible its installation in basements having lower than average ceilings.



Ambidexterity is another feature of the Model 19. The gas and electric lines may be brought in from either the right or left sides. Unit has a built-in draft diverter so that the flue pipe may be brought out the side or top of the furnace, according to installation demands. Extreme flexibility is provided by specially designed air filter racks, built so that the air filter can be used on the bottom or left or right hand side of the blower.

A single access door exposes the burner controls as well as the fuel compartment for easy handling. Model features a 2-stage fire and single speed blower. Finished in Silverspray Brown baked enamel. Perfection Stove Co., Cleveland, Ohio.

Winter Air Conditioner . . 7

New Ingersoll GHSS gas fired furnace requires less than 3 sq ft of floor space, may serve as a vented wall heater as well as a space heater and utility furnace.

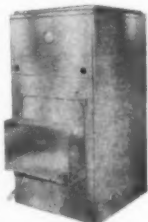


Used as a furnace, heat may be delivered in any direction through ducts connected to front, sides, back, or top of cabinet. Installed as a space heater, the low resistance grilles furnish maximum warm air circulation with minimum resistance. The unusual compactness is due to the inclusion of a compactly designed and efficient wedgetube heat exchanger. Installation costs are held to a minimum through the use of a built in plenum chamber and draft diverter. Assembly includes specially designed wedgetube heat exchanger, blower, filters, raised drill port burners, and fully automatic controls.

Approved by AGA.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.

Gas & Oil Fired Units . . . 8

A new pressure oil gravity furnace delivering 82,000 Btu at bonnet is a companion to the gas gravity model introduced last year which delivers 70,000 Btu at bonnet. This model, now available either oil or gas fired, enables builders to offer fully new, fully automatic heating at low cost. Furnaces are designed for easy installation, economy of operation, and long life. The gas burner used is a Conco monoflame, oil burner is the Conco Magic Spray pressure burner. Each model is either AGA approved or UL listed, is fire tested at the factory, and finished in baked red enamel, bond-erized for permanence.



Conco Engineering Works, Mendota, Ill.

Pipe Forming Machine . . . 9

A power driven pipe rolling machine is designed to roll 3 in. to 8 in. pipe without crushing the pipe lock. Pipes up to 36 in. long can be rolled.

Machine is of all welded construction and equipped with welded stands and chutes to facilitate handling the pipe. It is one of a group of three units developed to produce a completed pipe. Other equipment used in conjunction with the roller are a lock making and a lock bumping machine.

Fallsington Mfg. Co., Fallsington, Pa.

Hand Operated Sheet Metal Punch 10



Zing punch is designed to cut smooth, accurate holes in various types of sheet metal. It works on a simple punch method enabling the workman to quickly punch out a hole by hand. It consists of the four parts shown in illustration — the anvil, an adapter ring enabling two sizes of holes to be punched on the same tool, the chisel guide, and a special shaped chisel. (Diagram shows cutting method.)

Punches are made in a large selection of sizes including models for round holes, square and rectangular holes, and a special tool for forming round holes.
West Pacific Co., Portland, Ore.

New 1951 CHEVROLET TRUCKS

Better before...now better than ever

America's best truck investment is an even better one for '51! Yes, this latest line of Advance-Design trucks combines the greatest of Chevrolet's traditional advantages with new features and improvements that make your dollars go farther than ever! Along with outstanding power and economy, finest construction and superior

handling ease, Chevrolet Advance-Design trucks offer new, improved-design brakes, new Ventipanes, and Chevrolet's new cab seats—plus a host of other features that mean increased value to owners. See your Chevrolet dealer and look over this new line of 1951 Chevrolet trucks today. They're "best buys" every one!

CHEVROLET MOTOR DIVISION General Motors Corporation DETROIT 2, MICHIGAN



ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the 105-h.p. Loadmaster or the 92-h.p. Thriftmaster—to give you greater power per gallon, lower cost per load • **POWER-JET CARBURETOR**—for smooth, quick acceleration response • **DIAPHRAGM SPRING CLUTCH**—for easy-action engagement • **SYNCHROMESH TRANSMISSIONS**—for fast, smooth

shifting • **HYPOID REAR AXLES**—for dependability and long life • **NEW TORQUE-ACTION BRAKES**—for light-duty models • **PROVED DEPENDABLE DOUBLE-ARTICULATED BRAKES**—for medium-duty models • **NEW TWIN-ACTION REAR BRAKES**—for heavy-duty models • **NEW DUAL SHOE PARKING BRAKE**—for greater holding ability on heavy-duty

models • **NEW CAB SEATS**—for complete riding comfort • **NEW VENTIPANES**—for improved cab ventilation • **WIDE-BASE WHEELS**—for increased tire mileage • **BALL-TYPE STEERING**—for easier handling • **UNIT-DESIGN BODIES**—for greater load protection • **ADVANCE-DESIGN STYLING**—for increased comfort and modern appearance.



DRAVO HEATERS...

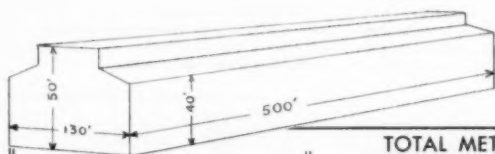
AS WELL AS MONEY.... FUEL...

Heating system steel needs *can* be slashed from 50% to 70% for the representative open-space industrial structure shown below . . . by using the direct-fired warm air heating method with Dravo "Counterflo" Heaters! This conservation, of vital importance today, adds another to the long list of economies in money, fuel and labor effected by this heating method.

The chart below gives the detailed comparative story. Every system is equivalent in Btu output. Steel requirements for the 13 methods have been carefully and conservatively calculated.

It will be noted that Dravo Heaters not only take LESS steel in each fuel classification . . . but that the HIGHEST steel requirement in a Dravo installation is almost 50% less than the LOWEST steel requirement in any other system. Of special significance is the contrast in pipe required. Jobs now held up by slow pipe deliveries can MOVE . . . if Dravo Heaters are used!

Any time that YOUR jobs are delayed or deferred because of steel or pipe shortages, why not find out how Dravo "Counterflo" Heaters are expediting things for other users? And remember—steel savings are just *one* of the reasons that more and more Dravo "Counterflo" Heaters are heating increasing numbers and types of structures. You'll find many other good reasons listed at right, that will appeal to you.



Each heating system compared below was sized to make up a calculated 12,000,000 Btu heat loss in this representative industrial building.



TOTAL METAL REQUIREMENTS FOR VARIOUS HEATING SYSTEMS

COMPONENT	GAS FIRED					OIL	
	DRAVO WARM AIR	HIGH PRESSURE CONVENTIONAL WATER TUBE BOILER	HIGH PRESSURE PACKAGED STEAM GENERATOR	LOW PRESSURE CONVENTIONAL WATER TUBE BOILER	LOW PRESSURE PACKAGED STEAM GENERATOR	DRAVO WARM AIR	HIGH PRESSURE CONVENTIONAL WATER TUBE BOILER
BASIC HEAT GENERATORS	26,400	38,000	62,000	38,000	62,000	26,400	38,000
PIPING—Oil—Steam Boiler Room—Gas	9,096	15,490	15,490	35,308	35,308	4,352	15,790
TANKS—Oil—Blow-off Condensate		3,500	1,500	1,500	1,500	13,000	16,500
UNIT HEATERS including Traps & Starters		21,240	21,240	21,240	21,240		21,240
STACKS & BREECHING	1,200	4,000	400	4,000	400	1,200	4,000
PUMPS—Fuel Oil Auxiliary Oil—Boiler Feed		1,000	1,000	1,000	1,000	400	1,400
STOKERS & FANS— including Dust Collectors Fuel Oil Preheaters							2,000
STRUCTURAL STEEL Boiler House Foundation Reinforcing		7,000	2,000	7,000			7,000
TONS of STEEL REQUIRED	DRAVO 18	45	52	54	61	DRAVO 23	53

.. "CONSERVE STEEL"

AND MAN HOURS

DISTRIBUTION PIPING AND DIFFUSERS
COMPLETELY ELIMINATED

LEAST STEEL PER 1,000,000 BTU OUTPUT

NO VALVES, TRAPS OR FITTINGS

STAINLESS STEEL CHAMBER
ELIMINATES REPLACEMENT

**DRAVO HEATERS HAVE
EARNED HIGHEST ACCEPT-
ANCE BECAUSE THEY**

- use less steel
- eliminate distribution piping
- have lower initial cost
- are very efficient in fuel consumption
- concentrate comfort heat at the working level
- reduce roof heat losses
- burn gas or oil
- are available in coal burning models
- save man hours through automatic operation
- require no attendant and negligible maintenance
- produce heat instantly and **ONLY** when needed
- have stainless steel chambers for longer life
- prevent rust and stain conditions in metal storage
- bear UL label and AGA approval
- require only stack, fuel and power line
- are portable and readily moved
- provide year 'round ventilation
- are ideal for process drying
- avoid freeze up worries, leaky traps, valves, etc.
- are shipped complete and flame tested
- can be installed on floor, wall or roof
- can be mounted upside down or horizontally
- eliminate ductwork with 150 ft. air throw

DRAVO CORPORATION

HEATING DEPT., DRAVO BUILDING, PITTSBURGH 22, PA.

Sales Representatives in Principal Cities.

Mfd. and Sold in Canada by Marine Industries, Ltd., Sorel, Quebec.

WITH IDENTICAL 12,000,000 Btu LOAD

FIRED			COAL FIRED		
HIGH PRESSURE PACKAGED STEAM GENERATOR	LOW PRESSURE CONVENTIONAL WATER TUBE BOILER	LOW PRESSURE PACKAGED STEAM GENERATOR	DRAVO WARM AIR	HIGH PRESSURE CONVENTIONAL WATER TUBE BOILER	LOW PRESSURE CONVENTIONAL WATER TUBE BOILER
62,000	38,000	62,000	27,450	38,000	38,000
15,790	35,608	35,608		14,990	34,808
14,500	14,500	14,500		3,500	1,500
21,240	21,240	21,240		21,240	21,240
400	4,000	400	1,200	4,000	4,000
1,000	1,400	1,000		1,000	1,000
	2,000		23,850	15,000	15,000
2,000	7,000			7,000	7,000
58	62	67	DRAVO 26	52	61

**WRITE TODAY
FOR BULLETIN
HI-523-80**



Here's Your Directory of Quality Soldering Supplies



ALLEN SPECIAL STAINLESS STEEL SOLDERING FLUX

(Item 5)

Here's a remarkable, fast flux that makes the soldering of stainless steel as easy as soldering tin plate. (Also available in a special odorless formula where less strength is required). "ALL-SOL" works with all solders but for best results use Allen stainless steel solder. Pints, gallons.



ALLEN SOLDERING SALTS

(Item 1)

An all around flux in convenient powder form; just add water 3 to 5 times according to metal to be soldered. Solders all metals but aluminum. Takes a quick bite and makes the solder hold on. Non-acid. Comes packed in metal or glass as preferred. $\frac{1}{4}$ lb., 1 lb., 5 lb. sizes.

ALLEN ALL-METAL SCRATCH BRUSHES

(Item 13)



A remarkable brush for speedily removing rust, corrosion, brightening metal. Brush is all metal, hence can be used under torch flame, etc. Brush can be cut off at end, thus renewing life as front end wears down. Bristles of tough, strong steel. Three brushes illustrate. Also one all metal brush, "straight-construction" for battery work, etc. Large, medium and small sizes.



ALLEN SOLDERING OIL

(Item 4)

A highly technical, concentrated soldering compound officially endorsed by the National Underwriters.

Causes neither verdigris nor corrosion. Gets into the tiniest crevice and takes the solder along with it. Makes perfect electrical and mechanical joints. For hand or machine soldering. Excellent for great soldering copper pipe joints. 1 lb., 3 lb., and 12 lb. sizes.

ALLEN SOLID SAL AMMONIAC

(Item 11)



Speedily cleans and brightens the soldering copper. Outlives fluxes; lasts many times.

Six sided, solid, convenient. Does not crumble, nor corrode metal work, nor tools on the job.



ALLEN Galvanized Iron SOLDERING ACID

(Item 7)

(Formula G. I.)

An active soldering acid for galvanized and hard-to-solder metals; and old metal that has been exposed to the weather. Works well on metal (write label shipping regulations). Quarts and gallons.

Note: For "all-a-pound" soldering on new and fairly clean work use Allen Soldering Liquid (see No. 6 below).

ALLEN SUPERTITE ACID SWABS

(Item 12)



Deep set bristles of good quality held tightly in heavy gauge holder; securely crimped, no jagged edges or rough metal exposed. No. 2 and No. 1 sizes.



ALLEN SOLDERING LIQUID

(Item 6)

Standard Formula. For all-around work, for all metals save aluminum and stainless steel.

17,000 pounds to the square inch with no gumming, fumes, or corrosion. Double strength, non-evaporating. Works like Lightning. Adaptable to hand or machine soldering. Excellent for tinning the soldering copper. 2 oz. 4 oz., quarts and gallons.

ALLEN SOLDERING PASTE

(Item 2)



Standard Formula. Safest soldering paste made—fast working—a convenient corrosion-free, soft form of flux. Adheres to the surface while you solder. Assures secure electrical and mechanical joints. Saves time. Triples strength of the solder. Makes solder self-fusing. Official National Underwriters Laboratory approved listing. 2, 4, 8, 16 oz.

ALLEN EZY-FLO Torch Formula Soldering Paste

(Item 2-A)



A special soldering paste for torch and "sweet joint" soldering. Also works well with the soldering iron. Comes in same sizes and at same prices as "Standard Formula." 2, 4, 8, 16 oz.



SILVER SOLDER WIRE AND RIBBON FORM

(Item 15)

Wire form for all around work. Excellent tensile strength, high vibration and corrosion resistance. Gives rigid, good color joint. Ribbon form same specifications as wire. (For band saw Wire Form work.)

FLUX FOR SILVER SOLDER

(Item 15-A)

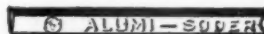
Provides quick, smooth flow giving deep sound silver solder penetration on most metals including stainless steel. 1 lb. and 5 lb. sizes.

ALLEN ALUMINUM SODER

(Item 18)

Allen Alumi-Soder is a complete solder and flux combined. Requires only heat to permanently join aluminum to itself or other metals. Comes in $\frac{1}{4}$ " square wire form and triangular $\frac{1}{4}$ lb. and 1 lb. bars. Also in popular trial size pieces, called 9 inch pieces. $\frac{1}{4}$ lb. and 1" bar and wire form.

Also solders cast-iron.



Send Your Letterhead!

Tell us what samples you want and what metals you solder — We will include with the samples no charge our new Jr. size all metal scratch brush.

FREE INTRODUCTORY OFFER

Check Samples Here
(Attach to your letterhead or list some on your letterhead)

- | | | |
|------------------------------|---------------------------------------|--|
| Item | | |
| <input type="checkbox"/> 1 | Soldering Salts | |
| <input type="checkbox"/> 2 | Soldering Paste | |
| <input type="checkbox"/> 2A | Ezy-Flo Torch Formula Soldering Paste | |
| <input type="checkbox"/> 4 | Soldering Oil | |
| <input type="checkbox"/> 5 | Stainless Steel Soldering Flux | |
| <input type="checkbox"/> 6 | Soldering Liquid | |
| <input type="checkbox"/> 7 | Galvanized Iron Soldering Acid | |
| <input type="checkbox"/> 11 | Solid Sal Ammoniac | |
| <input type="checkbox"/> 12 | Supertite Acid Swabs | |
| <input type="checkbox"/> 13 | All-Metal Scratch Brushes | |
| <input type="checkbox"/> 15 | Silver Solder—Wire and Ribbon Form | |
| <input type="checkbox"/> 15A | Flux for Silver Solder | |
| <input type="checkbox"/> 18 | Aluminum Soder | |

L. B. ALLEN CO., Inc.

6702 Bryn Mawr Ave.,

Chicago, 31, Ill.



CAST IRON FOR 1951



GRAVITY FURNACES AND AIR CONDITIONING UNITS

The Heating Element Is The Heart
Of Any Heating System

Cast Iron Heating Elements
Assure Long Life And Efficiency

USE ONLY GENUINE **WISE** REPAIR PARTS FOR
WISE FURNACES

THE WISE FURNACE COMPANY
AKRON, OHIO



*“Freedom of thought
and independence
of action...”*

DONALD W. DOUGLAS

President, Douglas Aircraft Company, Inc.

“Freedom of thought and independence of action are among the keynotes of America's economy. They are fundamental to our way of life. Systematic savings through the Payroll Savings Plan help the individual maintain his own independence and freedom of action and make us strong as a nation.”

In more than 21,000 large companies (employing 100 or more) and in many smaller companies, more than 8,000,000 men and women are helping to keep America strong. By systematic saving in U. S. Savings Bonds they are doing their part to offset inflationary tendencies . . . they are building a reservoir of future purchasing power to support industry...they are providing financial independence for themselves and their families.

The widespread success of the Payroll Savings Plan is an excellent example of our freedom of thought and independence of action. Far-sighted employers *offered* these 8,000,000 Americans an *opportunity* to enroll in the Payroll Savings Plan. There was no pressure, no emotional stimulation. A Payroll Savings Plan application was placed before them. They “signed up”—to the benefit of them-

selves, their companies and their country.

Has *every* man and woman in your company been *offered* an opportunity to share in the benefits of the Payroll Savings Plan? How about the newer employees? How about those who did not sign before but may wish to do so now? Delegate one of your top executives to conduct a person-to-person canvass of your employees to make sure that *every* man and woman gets an application blank. You don't have to urge them to enroll, or to increase their present allotment—they are anxious to build for their own independence.

Get in touch with your State Director, U. S. Treasury Department, Savings Bonds Division. He is ready to help you—with a package plan that reduces your work to the minimum.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the G. M. Basford Company and

AMERICAN ARTISAN



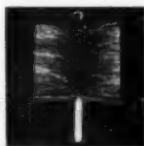
Schaefer BRUSHES

FOR PLUMBERS...FURNACE MEN...HEATING CONTRACTORS

Performance tested, SCHAEFER Brushes offer longer wear, better service, greater value—with the correct brush for every industrial and domestic use.

SCHAEFER Flue and Boiler Brushes of SILVER BRITE Rustproof Wire

SCHAEFER'S special alloy "Silver Brite" rustproof spring steel wire has been developed for longer wear, more effective cleaning. It offers extra value, extra satisfaction in any brush.



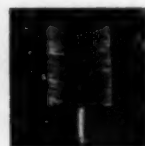
SCHAEFER Rectangular Flue Brushes
No. 8-415—2"x1"x1 1/2"
No. 8-416—3"x2"x1 1/2"



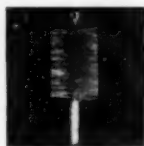
SCHAEFER Boiler Brushes
No. 8-393—1 1/2"x4"x3 1/2"
No. 8-394—2 1/2"x6"x5 1/2"
No. 8-395—3 1/2"x8"x6 1/2"



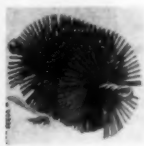
SCHAEFER Boiler Brushes
No. 8-396—1 1/2"x4"x3 1/2"
No. 8-397—2 1/2"x6"x5 1/2"
No. 8-398—3 1/2"x8"x6 1/2"



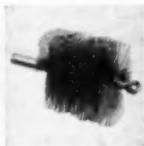
SCHAEFER Boiler Brushes
No. 8-399—2"x4"x3 1/2"
No. 8-400—2 1/2"x6"x5 1/2"
No. 8-401—3"x8"x6 1/2"



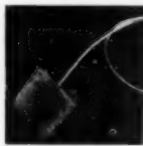
SCHAEFER Single and Double Spiral Flue Brushes
No. 8-432—Single Spiral—1" to 4" dia.
No. 8-433—Double Spiral—1" to 4" dia.
No. 8-434—For small Flues, 1/2" to 1" dia.



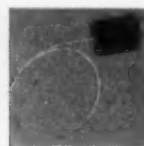
SCHAEFER Round Flue Brushes of Single Spiral Flat Steel Wire
No. 8-430—1" to 4" dia.



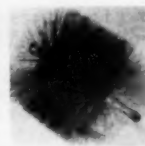
SCHAEFER Rectangular Flue Brushes of Flat Steel Wire—Spiral
No. 8-430—2"x2"x1 1/2"
No. 8-432—2 1/2"x3"x2 1/2"



SCHAEFER Furnace Brushes of Silver Brite Rustproof Steel
No. 8-442—3", 4", 4 1/2", 5" with 5 ft. handle.



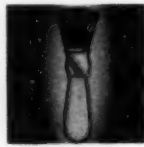
SCHAEFER Fibre Furnace Brushes
Selected Baseline fibre, flexible wire stem, 1", 2", 3", 4", 5", 6", 7", 8", 10" and 12" dia. 48" and 60" handle.
No. 8-444-445



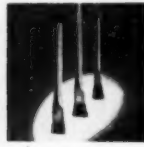
SCHAEFER Chimney Cleaning Brushes
No. 8-446—6", 7", 8", 10" and 12" dia. round style of Black Tempered Brush Wire.
No. 8-447—6", 7", 8", 10" and 12" dia. oblong style of Flat Tempered Steel Wire.



SCHAEFER Wire Wheel Brushes
Solid Center Type of crimped steel wire.
No. 276—6" dia. x 1 1/2" face.
No. 278—8" dia. x 1 1/2" face.
No. 280—10" dia. x 2" face.



SCHAEFER Handy Wire Brush
No. 816—For roughing, sanding etc., 6" long tempered steel wire trimmed 1 1/2".



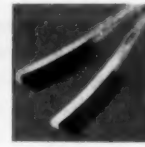
Tin Handle Acid or Dope Brushes
Selected grade bristles in tin handle. Widths, 1/2", 3/4", 1", 1 1/2", 2".



T. W. Flat Acid Brushes
Timers soldering brush, horseshair filling, 1 1/2" width, 7 1/2" overall. Twisted wire handle.



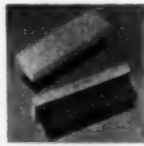
Radiator or Condenser Tube Brushes
Twisted in wire handle, selected hair or bristle. Wide range of sizes. No. 10—1/2" dia. x 2" brush x 1 1/2" overall.
No. 11—1/2" dia. x 3" brush x 1 1/2" overall.



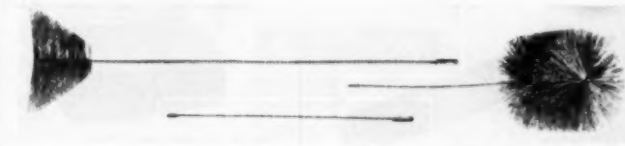
SCHAEFER Curved Handle Wire Brushes
No. 810—Oil tempered steel wire, trimmed 1 1/2", hardwood block, 14" long. Brush 6", 2, 3 or 4 rows.



SCHAEFER Shoe Handle Wire Brushes
No. 812—Oil tempered rustproof wire, 5" brush, 2, 3, 4 rows. Trim 1 1/2", overall 10".



SCHAEFER Straight Back Wire Brushes
No. 800-11—Oil tempered steel wire. Hardwood block, 7 1/2" x 2 1/2". Wire trim, 1 1/2", 6 x 19 rows.



SCHAEFER Vacuum Cleaner Brushes
No. 1005—Baseline Fibre Brush, 10 1/2" dia. tapered to 2" dia. x 6 ft. long—48" handle with threaded nipple at end.
No. 1006—Baseline Fibre Brush, 10 1/2" dia. brush x 10" long. Handle 39" with threaded nipple at end.

Wire Flue Brush and Extension Handles
4 ft. Handles with Nipple and Coupling.
5 ft. Handles with Nipple and Coupling.
6 ft. Handles with Nipple and Coupling.

Write for SCHAEFER Catalog of flue and furnace brushes, or for information on any special brushes for specific requirements.

SCHAEFER BRUSH MFG. CO.
117 W. Walker Street Milwaukee 4, Wisconsin

E-Z-ON DAMPER REGULATORS

For Simple Installation, Noise-Free Operation

FAMOUS E-Z-ON STANDARD DESIGN

Simplicity Plus No. 27, $\frac{3}{8}$ inch bearing. Solid end tail piece. Packed 1 dozen to a box. List price, \$3.30 per dozen sets.

The time it saves in putting in rattle-proof dampers makes the E-Z-ON Standard a favorite everywhere with sheet metal men. It has no rivets, screws, or pins. Made of zinc plated steel.

Extremely simple in application. Slip regulator over edge of damper, so points of prongs are over scribed center line. Lay assembly on block of wood for support, and drive prongs through sheet metal with hammer.

Turn assembly over and clinch prongs. Prongs are strong enough to pierce 22 gauge metal — AND THE WHOLE PROCESS TAKES LESS TIME TO DO THAN TELL ABOUT

THE NEW, SUPERIOR E-Z-ON "SNAP-TITE" DESIGN

Improved Regulator No. 29, $\frac{3}{8}$ inch bearing.

Tail piece with snap end bearing. Packed 1 dozen in a box. List Price, \$4.00 per dozen sets.

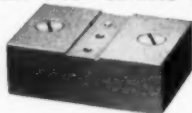
An improvement on the Standard. Same simple means of attachment is used, but tail piece has a retractable bearing. This eliminates need to bend damper or spring pipe to insert damper. Simply insert head piece through one hole, and slide the end with the "Snap-Tite" tail piece over the other hole, and it AUTOMATICALLY snaps through hole and LOCKS — free of rattle.

INDICATING HANDLES



No. 26 Indicating Handle. Zinc plated steel. $3\frac{1}{8}$ " long. One dozen to a bundle, one gross to a box. List price \$0.36 per dozen. Fit both No. 27 Standard and No. 29 "Snap-Tite." Available for those who wish to use indicating handles to more clearly show position of damper. Sold separately.

E-Z-ON STANDARD AND "SNAP-TITE" SETTING ANVIL



No. 25. Hardened steel. Weight $1\frac{1}{4}$ lbs. One in a box, with screws. List price \$2.50 each. Further reduces time to assemble regulators. Operates on principle of rivet set. Measures $1\frac{1}{2}$ " thick, 2" wide, 3" long. Drilled and counter sunk for attaching to shop bench, or heavy enough to use on the job without fastening down. Can also be used in kick or power presses. With this unit, one operation completely fastens and sets a unit.

E-Z-ON DAMPER REGULATORS ARE SELF INDICATING.

Tongue on headpiece is parallel with position of damper at all times. Clearly indicates damper position. Positive lock is accomplished by holding tongue with pair of pliers or wrench, and tightening wing nut.

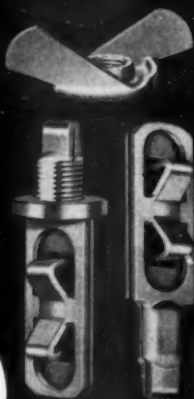


Illustration actual size. Patent No. 2,285,829

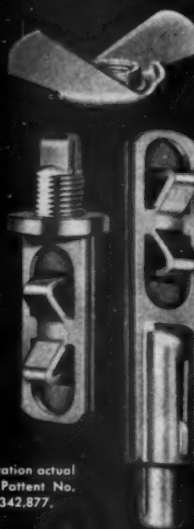


Illustration actual size. Patent No. 2,342,877.

Manufactured by

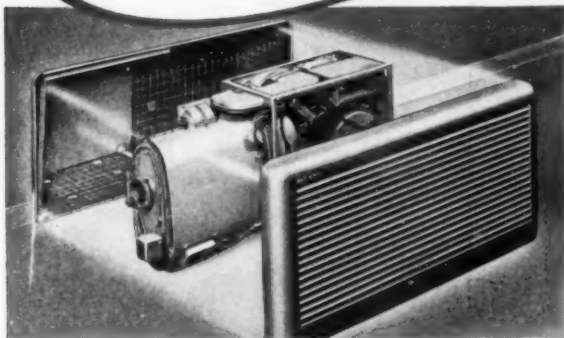
PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

M. A. GERETT CORP. MILWAUKEE 5, WIS.

Here's the profitable inside story on STEWART-WARNER *Safety-Sealed* HEATING

No larger than a suitcase, this versatile, compact unit is a complete and independent gas heating system that...

- Provides dependable, low-cost zone heating!
- Vents all combustion products through a "Safety-Sealed" exterior wall vent!
- Uses no room air for combustion!
- Can be recessed into any inside or outside wall!
- Automatically self-modulates heat flow!



Now you can sell the recognized advantage of zone-controlled heat in a "packaged" unit. This remarkable new South Wind 988 features Stewart-Warner's famous Safety-Sealed heating principle that positively seals all combustion air from contact with room air. Only outside air is used for combustion. And all combustion products are vented directly through a small exterior wall vent.

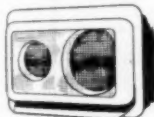
Easy to install in any inside or outside wall, this independent gas-heating system has a rated input of 31,000 BTUs per hour. Heats any room or group of rooms with a steady, gentle flow of forced-air heat, controlled automatically by a self-modulating thermostat.

Each zone or group of rooms is heated to its individual requirements by a separate, independent South Wind unit. Maximum comfort at minimum expense is achieved—without waste of room, closet or basement space! Just set each thermostat to the desired level—then forget it!



Finger-Tip Heat Control with a conveniently located modulating thermostat.

Small Housing for Exterior Vent—Eliminates chimney or room flue connection. Screened against insects and dirt.



"Safety-Sealed" Combustion-Chamber is hermetically sealed, all-welded stainless steel. Positively seals all combustion products from contact with room air.



These Stewart-Warner Units are "Safety-Sealed," Too!



SAF-AIRE WALL FURNACE. No electricity required. No moving parts to maintain. Installed in any outside wall. Large and small models available in Ivory, Beige, White or Aluminum finish.

SOUTH WIND ZONE FURNACE. Compact, forced-air unit, easily tucked away under the floor, in a closet or any convenient space. Short ducts from centralized installation. Thermostat control.

WRITE NOW

for complete, free information and specifications on the complete line of Stewart-Warner "Safety-Sealed" Gas Heating Systems. Select dealerships are still available in some territories. Address inquiries to Dept. AA-11, 1514 Drovers St., Indianapolis 7, Indiana.



Approved by American Gas Association

STEWART *Safety-Sealed* WARNER
DOMESTIC HEATING

MADE - RITE FURNACE FITTINGS

True to the name!

We said it — and we **mean** it! Made Rite furnace fittings are fabricated with the extreme care it takes to provide you with a quality item on every single order. You'll never have a report of time lost on the job because of the necessity for cutting or juggling. Made Rite fittings go in **right** the first time — your crews will be able to finish jobs faster and the time saved will be money in **your** pocket. And remember — at Made Rite no order is too small and none too large — we're set up to provide top quality fittings on every order. If you haven't used our fittings yet — why not send us a trial order and see for yourself why we say Made Rite fittings are "true to the name."

... and have you tried our

CONNECTING LOCK STRIP?



A time and material saver for quick and airtight installations of trunk line and wall stack fittings. Designed and fabricated with all the experience and years of precision manufacture built right in, this convenient item will result in maximum savings for you on every job.

**We solicit wholesale jobbing inquiries
... write us for more information.**

"Made-Rite" COMPANY, INC.

10th & MONROE STREET

NEWPORT

KENTUCKY



REGULAR ELBOW
STACK 90° #3



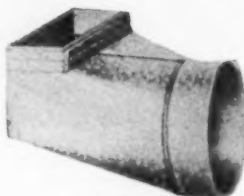
GALVANIZED
3 PIECE ANGLE 45°



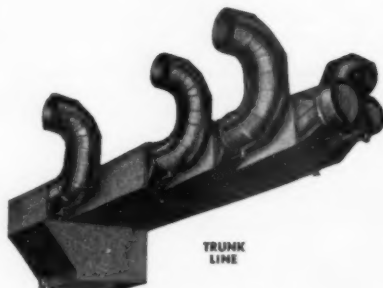
TRUNK LINE
NO. 105 15" 1/2



#113 TAKE OFF
DUCT BOOT



FLATWAY
STACK-BOOT NO. 12



TRUNK
LINE

These were 1950

Champions



in Football
U. of CALIFORNIA



in Baseball
NEW YORK YANKEES



in Ice Hockey
DETROIT RED WINGS



in Basketball
BRADLEY UNIVERSITY

in Furnaces . . .
SEQUOIA'S
New Horizontal
Model



• Illustrated:
Model H-80

All year long Sequoia jobbers and dealers rang up extra profits with new Series "H" gas furnaces—the space-saving horizontal units that sell faster, easier . . . serve with complete satisfaction wherever installed.

Sequoia horizontals are offered in three popular sizes for both residential and commercial heating—80,000, 100,000 and 120,000 BTU. Their compactness of construction (Model H-80 is 16 1/2" x 16 1/2" x 50" over-all) further reflects Sequoia's continued leadership in gas furnace engineering.

If you—Mr. Dealer—did not share in the flood of orders that made Sequoia Series "H" a 1950 champion best seller . . . prepare now for a profitable '51. Place an order immediately with your jobber, or write directly to the factory for complete details of the full Sequoia line.

All controls compactly grouped—positioned for ready access.

Attractive green enamel finish on heavy-gauge, scale-free steel casing.

Blower wheel and motor rubber-mounted for quiet, vibration-free operation.

Factory tested, completely wired and assembled before shipment.

symbol of  engineering leadership

SEQUOIA MANUFACTURING COMPANY

1000 Brittan Avenue, San Carlos, California



"Marshalling the forces of advertising to help solve national problems and to make democracy work better..."

Do you know that the forces of advertising are engaged today in one of the world's greatest jobs of mass education... in the public interest?

Do you know that these forces for good have been released through the vision and unselfish cooperation of American business — advertisers, advertising agencies, media owners and others?

Hundreds of advertising agencies have volunteered their planning and creative time and facilities. Artists, cartoonists, photo-engravers, printers, typographers and others have contributed their services.

Media owners have donated millions of dollars in space and time. National and local advertisers have sponsored and paid for many millions of public service advertising messages.

As a result, the American people are being alerted as never before to the dangers which threaten from within and from without... the dangers of ignorance about our American economic system, intolerance, tuberculosis, school and teacher shortages, etc.

And, at the hub of this great public service effort is your organization... The Advertising Council.

Advertisers and Media Owners... Your Help is Needed!

Right now The Advertising Council has 14 programs in operation. The success of these programs depends on the public spirited and generous cooperation of advertisers and media owners. *Your* help, in the form of space or time donations,

will mean a lot to us. And remember... *What helps America helps you!*

Yours for the Asking

Write for a copy of Booklet No. 15. It will give you pertinent information about The Advertising Council... how it started... what it is... what it does... Or ask for material on specific campaigns. Address:—The Advertising Council, 25 West 45th Street, New York 19, N. Y.



American Artisan

**6 North Michigan Avenue
Chicago 2, Illinois**

***A NON-PROFIT ORGANIZATION FORMED TO UTILIZE ADVERTISING IN THE PUBLIC GOOD**

Flying Saucers?

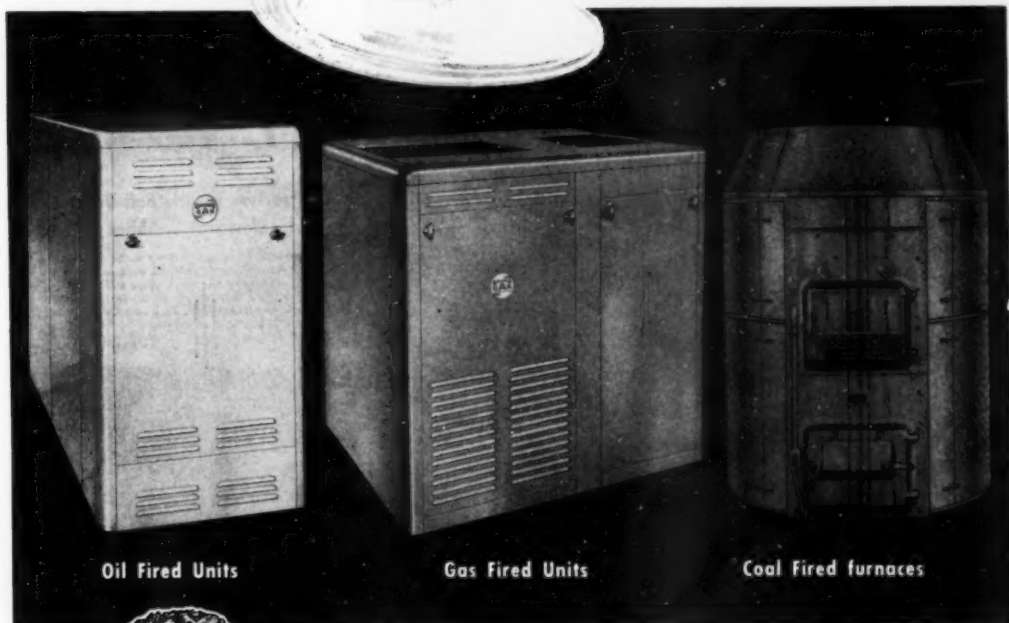
Yes...

modern as flying saucers!

The year 1951 may be filled with uncertainties; shortages, allocations, controls? But there is one thing about which there will be no uncertainties. That's the quality and dependability of Round Oak Warm Air Heating Equipment.

For Oil, for Gas and for Coal the Round Oak Line is complete with sizes in Forced-Air and Gravity to fill every residential heating need. Conversion Gas and Oil Burners; Gravity and Forced-Air Fittings; Repair castings for most makes of furnaces.

In good times or times of scarcity there's no substitute for Round Oak quality. Better get the facts—Mail the coupon today—right now, before you forget it.



ROUND OAK COMPANY, INC.

DOWAGIAC, MICHIGAN

"A famous name in heating since 1871"

ROUND OAK CO., INC. • Dowagiac, Michigan

The ROUND OAK Line interests us, please send information

- | | |
|---|---|
| <input type="checkbox"/> Gas Heating Units | <input type="checkbox"/> Oil Heating Units |
| <input type="checkbox"/> Coal Heating Units | <input type="checkbox"/> Gas Conversion Burners |
| <input type="checkbox"/> Oil Conversion Burners | <input type="checkbox"/> Pipe and Fittings |

Name

Company

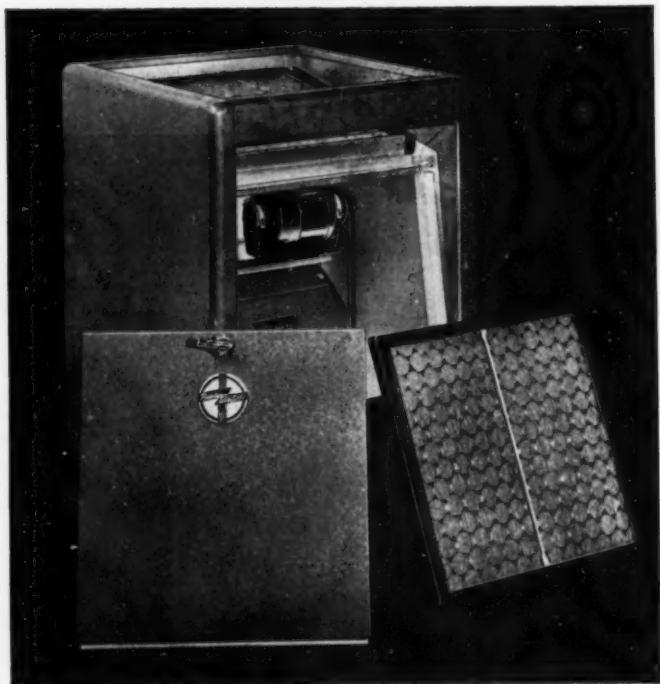
Address

City Zone State

MAKE *Peerless Electric* YOUR HEADQUARTERS FOR PACKAGE UNITS AND BLOWERS

For 58 years Peerless Electric has been designing and building quality fans, motors and other electrical equipment. This half-century of experience stands behind Peerless Blower Units and is your assurance of quality products that give long, trouble-free

service. Peerless Blowers, including the motors, are manufactured entirely in our own modern plant. Peerless is not just an *assembled* line — another reason why Peerless Blowers are the preferred blowers on many nationally-known heating units.



Peerless Electric Package Blower Filter Unit

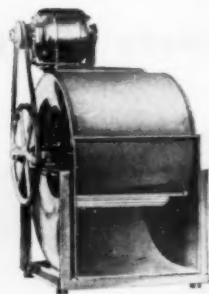
A Complete Unit including Filters Ready for Installation

Clean, Modern Design • Baked Enamel Finish

Heavy Gauge Steel • Balanced Wheels

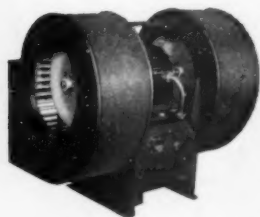
Quiet Operation • Large Access Door • Easily Serviced
Direct or Belt Drive

This Peerless Electric Blower is available with wheels 10" in diameter providing 1,000 CFM up to wheels 21" in diameter providing 6,600 CFM. Bonnet control is furnished as an extra if desired.



Peerless Electric Belt Drive Blower Assemblies

These belt drive assemblies without casing or filters, can be furnished with either top or rear mounted motors. Designed for building into the furnace or for those installers who make up their own cabinets. Capacities 1,000 CFM to 6,600 CFM.



Peerless Electric Direct Drive 3-Speed Blower Assemblies

Twin Blowers • Three-Speed Peerless Motor
• Only Two Bearings • Resilient Mounted Base • Quiet Operation • No Belts or Pulleys • Compact Assembly

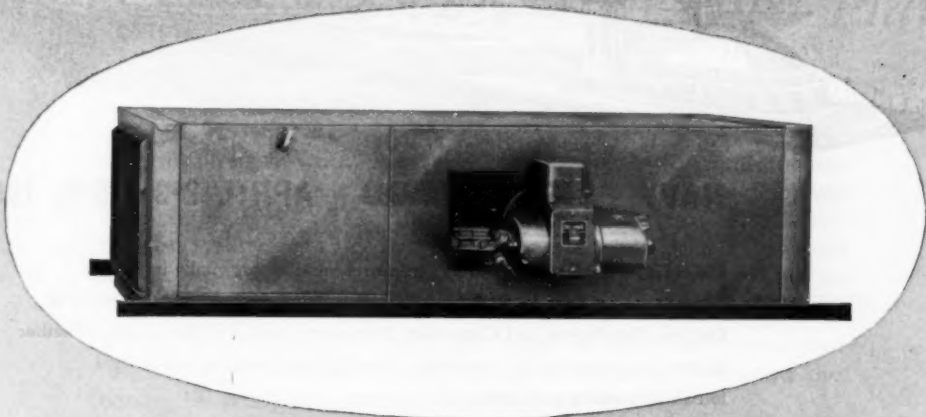
The Peerless Electric direct drive, 3-speed blower assembly is the answer to modern warm air heating. This unit is a natural for continuous air circulation which keeps a home comfortably heated without "cold spots." Blower wheel sizes 6" to 11". Capacities 800 CFM to 2,000 CFM.

THE PEERLESS ELECTRIC COMPANY • Established 1893 • WARREN, OHIO

Peerless Electric MOTORS • FANS • BLOWERS

**QUIET AUTOMATIC
OIL FURNACES**

SUSPENDED OR LAYDOWN AIR CONDITIONING FURNACES



SPACE SAVER

Excellent for service stations, stores or basementless homes...Four sizes: 85,000 btu, 142,000 btu, 175,000 btu, 240,000 btu. Completely assembled with blower,

filter, insulated combustion chamber, the world famous Quiet Automatic Oil Burner with 2-stage pump and all controls.

WRITE TODAY FOR FULL DETAILS

QUIET AUTOMATIC BURNER CORP.

FACTORY AND
WAREHOUSES:
17-19 GROVE ST.
MONTCLAIR
(Newark Suburb)
NEW JERSEY

ESTABLISHED 1923 • J. GORDON KAVENY, PRES.

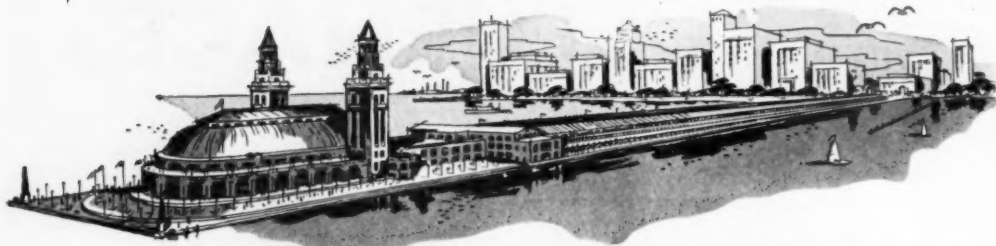
**33-35 BLOOMFIELD AVE., near Broadway
NEWARK 4, NEW JERSEY**

BRANCHES OR
DISTRIBUTORS
FROM MAINE TO
FLORIDA, CHICAGO
ST. LOUIS AND ALL
IMPORTANT CITIES

1950—Oil Heat's Greatest Year!
1951—Oil Heat's Greatest Exposition!

19th

NATIONAL OIL HEAT EXPOSITION



NAVY PIER, CHICAGO • APRIL 2-3-4-5-6, 1951

EXHIBITORS: Be sure you're represented at this vitally important "decision point" for 1951 selling! Exhibit your products to this gathering of Dealers, Distributors and Consumers from every section of the world! (Whether or not your company is a member of the Oil Heat Institute, it is invited to exhibit eligible products.)

MEMBERS OF THE INDUSTRY: Make your plans now to visit Oil Heat's Greatest Exposition, and to attend each session of the concurrent 28th Annual Convention of Oil-Heat Institute of America.

FOR INFORMATION, Floor Plan and Prices address or phone:

OIL-HEAT INSTITUTE OF AMERICA

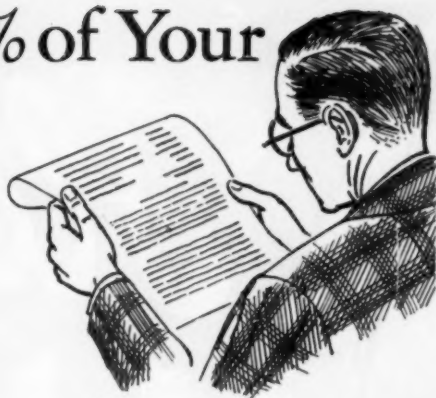
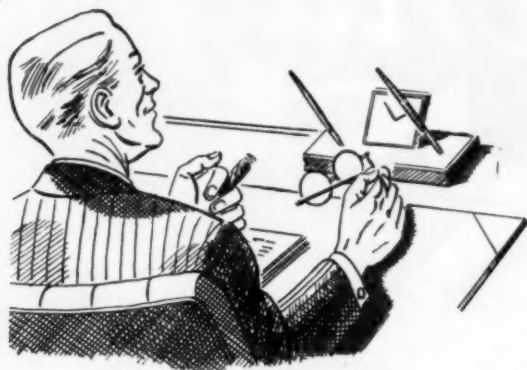
6 East 39th Street, New York 16, N. Y.

Murray Hill 5-1638



★ BETTER HEAT WITH OIL HEAT ★

You Can Keep 50% of Your Blower Dollar...



... in
Your Own Plant

To every plant comes the recurring question—to what extent shall we assemble—or manufacture. In some cases this is a difficult decision—not with Morrison Blower Assemblies, however. In this case you can keep at least 50%—possibly 55% of your blower dollar in your own plant. To break this down—wheels, drives and bearings will cost approximately 45%—certainly not more than 50% of your blower dollar.

The balance remains in your own plant to help carry your overhead. It is an additional profit, without increase of overhead that cannot be passed by without careful examination.

Morrison has available to you, to help you build your own Blower Assemblies, complete engineering service with all drawings and templates furnished. Morrison Airstream Blower Wheels come 10" to 16" double width, double inlet. When desired, Morrison Squares or Scroll Sides can be furnished, also Bearings and Drives.

MORRISON



BLOWER
WHEELS

*Send for Morrison Catalog
which will give you complete story.*

MORRISON PRODUCTS, INC.

16816 WATERLOO ROAD
CLEVELAND 10, OHIO

IT'S

Handy



Standardized FITTINGS

From its inception away back in 1892 HANDY PIPE has been designed and constructed to FIT.

And through the years HANDY PIPE has maintained that basic accuracy that enables workmen to assemble it properly and quickly into stacks and ducts that perform their jobs with complete satisfaction as long as the structure they are in holds together.

That means minimized installation costs.

And it means continuing customer satisfaction.

We are geared to produce all of the HANDY PIPE that availability of materials will permit.

F. MEYER & BRO. CO.
Established 1866
PEORIA 2, ILLINOIS



Our Catalogue No. 53 is available on request if you do not have a copy.

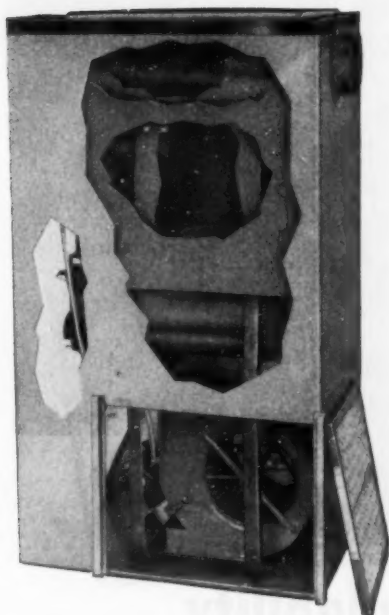


See Kaustine First At Philly

Yes — See Kaustine — "First At Philly"

**Inspect the complete line of Kaustine Oil Fired Winter Air Conditioners
At Booth 321**

**10th International Heating & Ventilating Exposition
Commercial Museum, Philadelphia, Pa., Jan. 22-26**



Inspect KAUSTINE For Design

Inspect KAUSTINE For Construction

Inspect KAUSTINE For Economy

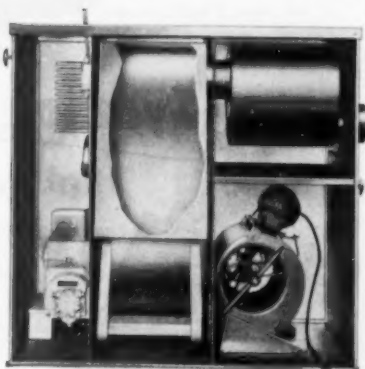
Then Compare —

See how Kaustine's "Airway" designed combustion chamber and economizer are designed to provide large areas of evenly heated metal to be exposed to the direct air stream — how the radiation sheets inside the casing direct the air stream across these heated surfaces insuring that a maximum of heat energy is absorbed into the air stream — how the chrome steel firepot liner and internal baffle insure that heat energy reaches all the metal of the chamber and economizer.

See Kaustine's Factory Assembled High-boy Models from 65,000 to 95,000 BTU Bonnet Rating

Factory Assembled Low Boy Models 85,000 to 110,000 BTU Bonnet Rating

**Larger Units to 240,000 BTU Bonnet Rating
See these — then choose Kaustine as
your line for '51**



If you cannot be at the exposition, write or phone direct for complete information.

Kaustine Co., Inc. Dept. A11 Perry, N. Y.

Over 34 years service to the American Home Owner



Symbol of Dependability



Write for these Emerson-Electric Motor Data Bulletins

Appliance and equipment manufacturers, with applications for motors of 1/20 to 5 h.p., can profitably use these authoritative reference guides. Specifications, construction details and performance data are included for the following types:

- ☐ No. 104-A Capacitor-Start Motors
- ☐ No. 104-B Split-Phase Motors
- ☐ No. 104-C Integral Motors
- ☐ No. 104-D Fan-Duty Motors
- ☐ No. 104-E Oil-Burner Motors
- ☐ No. 104-F Jet Pump Motors
- ☐ No. 104-G Blower Motors

In earning a reputation for dependable performance there is also the opportunity to demonstrate leadership. Only a very few accept the challenge. You can point out one or two leaders, in every line of manufacture, whose success resulted from their products having become symbols of dependability.

Scores of America's best known manufacturers depend on Emerson-Electric motors to power their products. They know that customer satisfaction and dependable performance go hand in hand.

A background of 61 years of motor manufacturing experience stands behind Emerson-Electric motor design and production, offering the right motor for every job, in ratings from 1/20 to 5 h.p.

Consider the advantages of Emerson-Electric motors when planning your long-range program for top-flight leadership ratings on your equipment. Send for complete literature today.

THE EMERSON ELECTRIC MFG. CO.
ST. LOUIS 21, MO.



Unchanged for '51

SMALLER - BUT GREATER! NEW *"Thrifty Fifty"* **Niagara FURNACES**

GAS-FIRED

NOW provide more heat per cu. ft. of space occupied... units are approximately 30% smaller than previous Niagaras of equal capacity



NEW SERIES 50 Winter Air Conditioner Input 100,000 BTU*

NOW		BEFORE	
HIGH	48 1/2"	HIGH	53"
WIDE	47 1/4"	WIDE	56 1/4"
DEEP	31 1/4"	DEEP	36 1/4"
CU. FT.	14.9	CU. FT.	14.9

*Made in 3 capacities

NEW SERIES 50 Gravity Furnaces Input 95,000 BTU*

NOW		BEFORE	
HIGH	48 1/2"	HIGH	58"
WIDE	38 1/4"	WIDE	38 1/4"
DEEP	31 1/4"	DEEP	38 1/4"
CU. FT.	9.8	CU. FT.	9.8

*Made in 4 capacities

...with Niagara's Famous Cast-Iron* Heat Exchanger

All Series 50 Niagara units, made in units for large, medium and small homes, have the famous Niagara cast iron heat exchanger, long noted for efficiency and durability. Forced air units include De Luxe models with forced air chamber in copper.

*Chromium-iron alloy.

3-speed direct drive blower and standard units with single speed belt drive blower. Write for complete catalog.

**NIAGARA FURNACE DIVISION
THE FOREST CITY FOUNDRIES COMPANY
2500 West 27th St., Cleveland 13, Ohio**

V-16-1RA makes all 3: Gas • Oil • Coal Furnaces • Cast Iron or Steel

◀ "This is IT," say Dealers and Users of the *"Thrifty Fifty"*

● With Niagara dealers and their customers in complete agreement that the Niagara Series 50 furnaces have everything a modern furnace should have, these "50" units will continue as '51 leaders.

"Powered" by the improved version of the long-famous, exclusive Niagara-made cast-iron heat exchanger with copper-chromium-iron alloy combustion chamber, of which thousands have long been giving outstanding performance with **LOW GAS BILLS**, the Series 50 is popularly known as the "Thrifty Fifty."

There are five DeLuxe models with 3-speed direct-drive blowers; five standard models with single speed blowers and gravity models in four capacities—a line of furnaces with which any experienced heating contractor can build an enviable reputation. Watch for further developments which will make the Niagara line more than ever the one you'll want for '51.

Another Size Added to the Popular **Niagara** Vertical AC Utility Units

Thousands of installations of the pack-aged-unit gas-fired Niagara Series 10 VAC Utility Winter Air Conditioners have proved their outstanding performance—created big demand for a smaller size. These VAC units now are available

in three capacities—50,000, 75,000 and 100,000 BTU input.

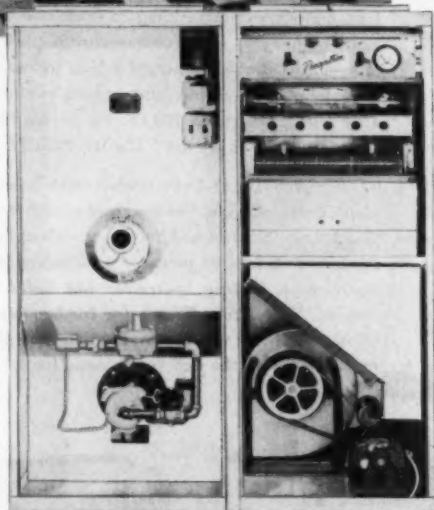
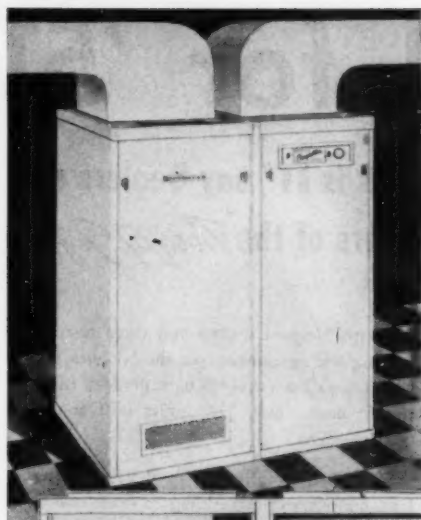
Here are fine performers for small homes and apartments—compact units for compact homes, and they come packed as completely assembled units, ready for quick, easy installation—the smallest occupying less than 5 square feet of floor space.

Now, more than ever, the Niagara line offers outstanding profit opportunities to dealers. Write for complete information—today.

**NIAGARA FURNACE DIVISION
THE FOREST CITY FOUNDRIES COMPANY
2500 West 27th St., Cleveland 13, Ohio**



Niagara makes all 3: Gas • Oil • Coal Furnaces • Cast Iron or Steel



Heating Unit The Precipitron
GAS OR FUEL OIL

The Dualtron®

CLEANS as it HEATS
with the WESTINGHOUSE

Precipitron

DUALTRON is a new—but thoroughly proved—system of heating, combined in a single, compact, space-saving unit with the famous Westinghouse Precipitron. It cleanses air electronically—removes up to 90% of the damaging dirt before it gets a chance to enter the heating system.

DUALTRON then heats the clean air automatically, with an efficiency that brings new comfort in any degree of winter weather. It's all one operation.

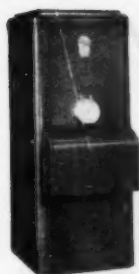
LESS CLEANING—No constant, heavy house cleaning. Draperies, furniture coverings, rugs and walls stay clean and fresh for unbelievably long periods.

MORE COMFORT—No sudden gushes of warm air, alternating with cold drafts. Heat flows evenly, gently. Humidity is maintained at correct levels—you breathe clean, moist air.

*Architects
and Contractors*

ARE WELCOME TO
OUR ENGINEERING SERVICE

The DUALTRON Company
322 Perry Highway Pittsburgh 29, Pa.
Phone WELLington 1-2021



- ★ for a complete line
- ★ for greater customer satisfaction
- ★ for bigger profits for you

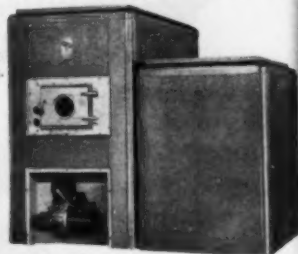
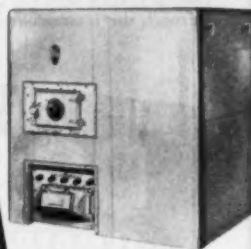
SELL HESS in '51

COMPLETE LINE — Hess offers you a complete line of modern warm air heating equipment for practically every requirement — gas, oil and coal — gravity and forced air. Beautiful cabinet design and gleaming **white baked enamel finish** on most models offers you tremendous sales possibilities. There's a real advantage in meeting all your requirements from a **reliable, experienced furnace manufacturer.**

CUSTOMER SATISFACTION — Hess' 78 years of experience and leadership in warm-air heating assure your customers of high quality equipment and the latest developments for greater efficiency and comfort. All units incorporate the basic Hess principle of **square heat exchanger design**, a principle which offers greatest possible radiant heating surface for maximum heating efficiency.

Customers will like the gleaming **white baked enamel finish** — available on most models.

BIGGER PROFITS — Selling Hess means easier sales . . . greater volume . . . and less service . . . means more profits for you.



Write Today — for details on the Hess profit-winning line for '51.

**OUR
78th YEAR**

The Hess Company
CHICAGO 6, ILLINOIS

**SINCE
1873**



Ask Anyone Stocking Them!

HOW THEY PERFORM

No matter what you pay you can't buy better made, more dependable controls than the reasonably priced Crise line. They work as good as they look.

HOW THEY REDUCE INVENTORY

Crise controls are versatile. Several of them can be used for a number of purposes. This flexibility permits stocking at least half the normal number of control types.

HOW THEY SAVE ON THE JOB

By carrying a few multi-purpose Crise controls in the truck, installation men are always sure to have the right unit at hand.

HOW EASY THEY INSTALL

Crise controls are small, compact, easy to handle. Ample space is provided for internal wiring. For added convenience, scale settings and thermal temperatures are visible through the lucite cover face.



TYPE FOL-50—A hot water temperature control, hi-limit or operating, with bi-metal sensing element enclosed in a collapsible "can" which molds tightly around pipes for greater contact area, quicker response to temperature change.

TOP QUALITY, GREATER UTILITY, LOW PRICE

Now is the time to get full facts on the Crise money saving, profit making line of temperature controls. Learn how they will benefit both you and your customers. Write today for a copy of our latest catalog and price list.

NEW CRISE TEMPERATURE CONTROLS



TYPE FOL-60

Warm air limit control or fan control



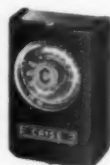
TYPE FOL-70

Hot water temperature control, immersion type



TYPE FOL-50

Hot water control, surface or strap-on type



TYPE FAF-15

Two speed furnace fan control



TYPE FAL-10

Combination furnace fan and limit control



TYPE FAL-30

Hot water temperature control, dual circuit immersion type



**CRISE CONTROLS DIVISION
ACRO MANUFACTURING COMPANY
COLUMBUS 16, OHIO**



Flying Saucers?

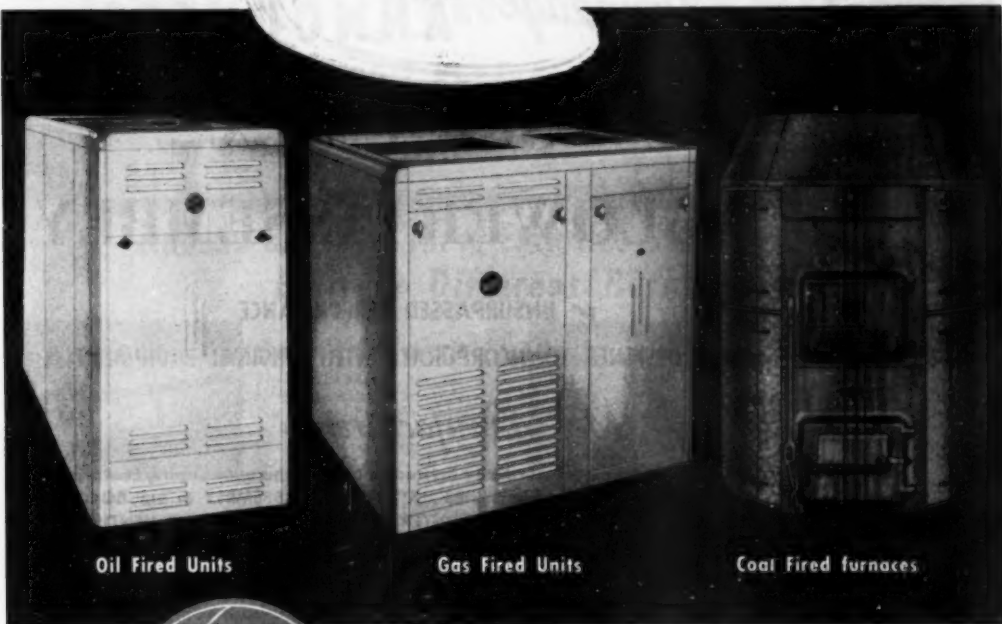
Yes...

modern as flying saucers!

The year 1951 may be filled with uncertainties; shortages, allocations, controls? But there is one thing about which there will be no uncertainties. That's the quality and dependability of Peerless Warm Air Heating Equipment.

For Oil, for Gas and for Coal the Peerless Line is complete with sizes in Forced-Air and Gravity to fill every residential heating need. Conversion Gas and Oil Burners; Gravity and Forced-Air Fittings; Repair castings for most makes of furnaces.

In good times or times of scarcity there's no substitute for Peerless quality. Better get the facts—Mail the coupon today—right now, before you forget it.



Oil Fired Units

Gas Fired Units

Coal Fired furnaces



PEERLESS FOUNDRY COMPANY

1853 LUDLOW AVENUE • INDIANAPOLIS, INDIANA

Pioneers in warm air heating for 50 years

PEERLESS FOUNDRY CO.

1853 Ludlow Avenue • Indianapolis, Indiana

The PEERLESS Line interests us, please send information

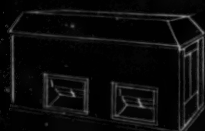
- | | |
|---|---|
| <input type="checkbox"/> Gas Heating Units | <input type="checkbox"/> Oil Heating Units |
| <input type="checkbox"/> Coal Heating Units | <input type="checkbox"/> Gas Conversion Burners |
| <input type="checkbox"/> Oil Conversion Burners | <input type="checkbox"/> Pipe and Fittings |

Name _____

Company _____

Address _____

City _____ Zone _____ State _____



TWIN



ECONOMY



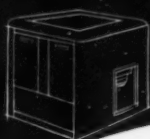
BABY "B"



ATTIC FANS



FURNACE
BLOWERS



DELUXE



CEILING



FLOOR

AIR RENEWERS

BLOWER FILTER UNITS

AIR HANDLING

EQUIPMENT

...AND NOW

Brundage ANNOUNCES

SERIES "X"

BLOWER ASSEMBLY

- ✓ UNSURPASSED PERFORMANCE
- ✓ DESIGNED TO INCORPORATE WITH ORIGINAL EQUIPMENT

Mr. Manufacturer:

You are cordially invited to inspect the outstanding features of this new SERIES "X" BLOWER ASSEMBLY in our BOOTH # 62 at the 10th INTERNATIONAL HEATING AND VENTILATING EXPOSITION, Philadelphia, Pa., January 22-26, or write for complete engineering data.

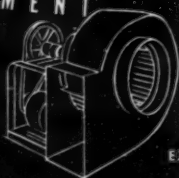
Brundage
COMPANY

*Blower Specialists
Since 1919*

541 NORTH PARK STREET
KALAMAZOO 11, MICHIGAN



SPECIAL
BLOWERS



EXHAUSTERS

NO OTHER Oil-Fired Equipment Can Match Electrol

**Complete Line: Oil Burners • Air Conditioners
Water Heaters • Boilers**

**Nobody Else Has These Exclusive Sales Features!
Entirely Different Burner!**



Cut-Off Valve

No other burner has this quick shut-off valve at nozzle. No oil drooling. No fouled nozzles. No after drip. No costly magnetic valves needed. Less service.



Ball Flame

No other burner has this suspended intense flame. Rotating fire never touches wall of chamber. Burns 100% "cat-cracked" oil without adjustment. Cleaner Boilers. Less service.



Master Control

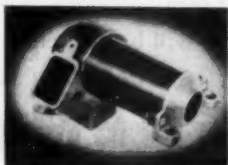
No other burner has a control operating on clean air instead of corrosive flue gases. Burner mounted, wired and tested at factory. No relays. No transformers. Less service.



Thermo-Loop

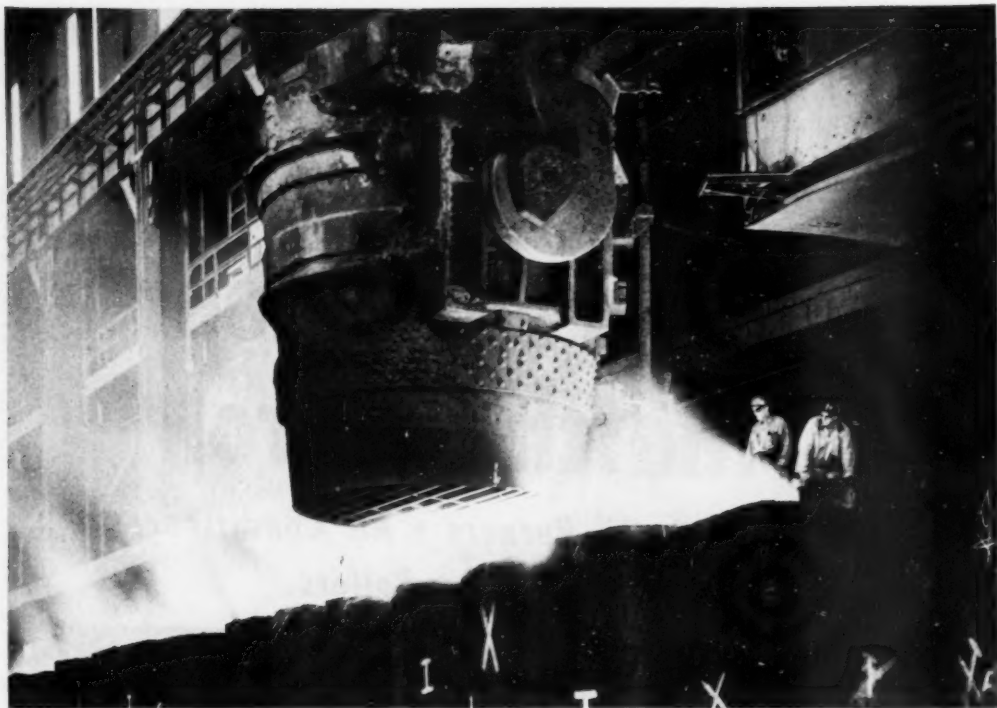
No other burner has this pure nickel heat exchanger. Operates safety control on pure air. Located right in combustion chamber. Constant performance regardless of flue gas temperature. Less service.

Dealers!
You'll
Find Electrol
Easier to Sell!
... Exclusive
Agencies
Available!
**WRITE
TODAY!**



Spiralon

No other burner uses a large expensive casting to deliver air to combustion head. Because of this, no other burner has Electrol's intense flame. Highest alloy flame director. Prevents burnt air tubes. Less service.



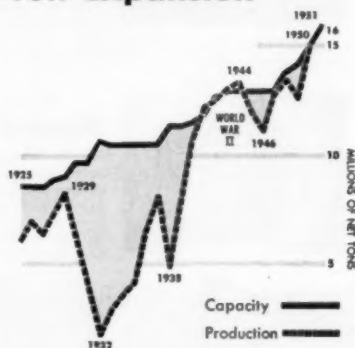
MILLION TONS MORE STEEL

**Latest Increase in Bethlehem's Annual Capacity Climaxes
5 Years of Postwar 3,100,000-Ton Expansion**

On January 1 of this year Bethlehem's steel making capacity stood at 16 million ingot-tons annually—an increase of 1 million tons over a year ago.

Since the war ended we have increased our annual steelmaking capacity 3,100,000 tons, or 24 per cent.

Moreover, as the chart at the right shows, Bethlehem's steel capacity has nearly doubled in 25 years. Additional capacity can and will be created as it is needed.



BETHLEHEM STEEL ★



★

"The Standard of the Industry"



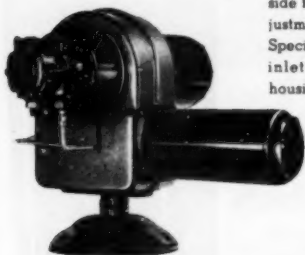
Used by more of America's Leading
Manufacturers of Oil Heating Equipment

MODEL 54

For Commercial and Large Residential Use

More compact yet more efficient for heating and hot water in stores, apartment buildings and similar installations. Incorporates an easily adjustable hinged damper on right hand side as well as usual air intake on pump side for more exact air adjustment at every capacity. Specially designed, double-inlet fan brings air into housing from both sides.

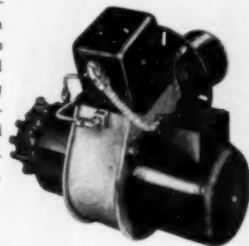
With 2-stage pump.
5 to 8½ GPH.



MODEL 55

For Packaged Heating Units

This more compact pressure type burner is exceptionally easy to adapt to a wide range of heating units. It fits vestibules measuring only 9½" and mounts directly to the boiler by means of a flange. Among its many time-saving features are: 10 second nozzle removal, and a transformer which swings aside breaking electrical contact and permitting easier drawer assembly removal. Available in standard and odd cycles and voltages. Capacity 0.6 to 3.5 GPH.



MODEL 52A

Domestic Conversion Oil Burner

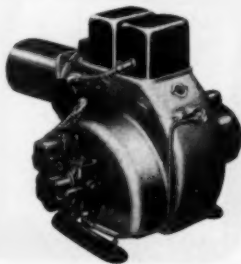
Famous for many years as the gun type oil burner that combines maximum efficiency and economy with smoother, quieter, trouble-free operation. Features exclusive ABC Choke, Spinner, Coupling and Oilairator mechanism for developing truly efficient combustion. Capacity 0.6 to 5.0 GPH.



MODEL 53

Industrial Oil Burner

Provides dependable, economical oil heat for small to medium sized factories, institutions, etc. Built-in safety combustion control eliminates need for any stack relay; positive, built-in automatic electric oil cutoff eliminates after-burn . . . has dual ignition and dual nozzles, hinged transformers, two-stage pump. Suitable for front or rear of furnace mounting. Capacity 8½ to 18 GPH.



WRITE FOR COMPLETE INFORMATION

AUTOMATIC BURNER CORPORATION

1823 W. CARROLL AVENUE • CHICAGO 12, ILLINOIS



BECO

indicator switches

**Finger tip control for Home—Office—
School—Factory or General Assembly.**

The complete line of BECO indicator switches and parts are now available from a central source of supply.

One or more station controls, with multiple gang switches ready for immediate assembly from our stock component parts.

BECO switches come with or without lights, on single, double or multiple plates, either in plastic or metal, with a wide variety of nameplates, materials and plate designs.

A special relay to use with our 24 volt circuit.

Easy to follow wiring diagram packaged with each switch.

Write today for your (free) catalog on the versatile—dependable—economical BECO indicator switch.

BURKE ENGINEERING CO.

2505 E. 24th St., Los Angeles 58, California

beco

At the 10th Air Conditioning Exposition in Philadelphia . . .



... See these high-efficiency automatic Anthracite heating units America's best fuel buy is Anthracite

With these modern Anthracite-burning units, you can offer your clients and customers the ultimate in clean heat—even heat—economical heat—trouble-free heat in abundance. See the newest models at the show, or write for descriptive literature to Anthracite Institute, 101 Park Avenue, New York City, N. Y.

ANTHRAFLO—An entirely different type of boiler-burner, with many points of design never before found in home burners. Fully automatic . . . the coal feeds direct from bin across the stationary grate. Ashes discharge into container within unit. All working parts are accessible from outside the unit. For steam, hot-water and warm-air systems. Provides year-round hot water.



ANTHRATUBE—The revolutionary design that operates at a *proved efficiency of over 80%*. The "whirling heat" principle, supported by several other field-tested innovations, give Anthratube faster response and superior performance . . . the very peak of fuel-burning efficiency! Provides year-round hot water.



MODERN ANTHRACITE STOKERS—Automatic conversion stokers are available for installation in existing boilers or furnaces—specially designed in complete boiler-burner units, such as *Motor Stoker*, *Electric-Furnace* and others. All offer high efficiency, small size and economical operation. All are completely automatic from bin to ash removal. Provides year-round hot water.

ANTHRACITE (HARD COAL) INSTITUTE



Bryant Model 322 Unit Heater
with A.G.A. inputs of 110, 135,
175, 210 thousand Btu per hour.

How to cut maintenance Overhead

Best bet for your industrial or commercial heating installation is the unit heater you can sell on the basis of *least maintenance*. That's where your customer looks for long-range economy and lasting satisfaction.

Tell him of the trouble-free operation of Bryant Gas Unit Heaters . . . how their specifically designed unit heater controls eliminate failures . . . how proper heat exchanger design prevents burnouts and squeezes a maximum of heat from every dollar's worth of fuel . . . how simple, time-saving installation of these Bryants meets his needs for comfort heating that's quick, automatic and without waste. These advantages mean *savings* for him.

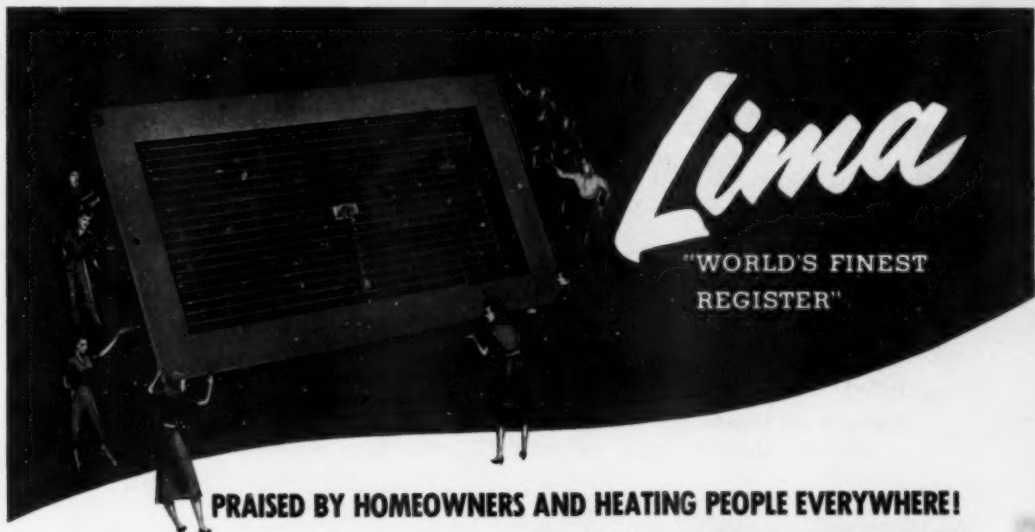
And, once installed, you can count on these Bryant Unit Heaters for fewer call-backs . . . less trouble *overhead*. That's money in the bank for you!

For a more complete story, contact the Bryant Distributor nearest you or write direct, Bryant Heater Division, Dept. 171, Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, O.



Your single source of supply for everything in gas heating equipment!





Lima

"WORLD'S FINEST REGISTER"

PRaised BY HOMEOWNERS AND HEATING PEOPLE EVERYWHERE!

... because it saves installation time and costs! Amazing "Balancing Bell"* control eliminates quadrant dampers, puts volume control in the *register itself*! One man does balancing, quickly, easily, by placing bell at proper setting on chain which controls valve!

... because it simplifies heat control! No more service calls for re-balancing! With simple instruction, homeowner can adjust heat delivery to individual rooms by himself! And, to shut off heat completely, he merely pulls chain out, thus closing valve tightly!

... because it's as strong as it is beautiful! No center strip or mullion to detract from smooth, one-piece face! Gives perfect draft-free air diffusion! Vertical diffusion blades individually *resistance-welded* to face louvers! Handsome "metallac" finish beautiful by itself, a perfect base for any other finish.

NEW! Lima FLOOR DIFFUSER



SPECIALLY DESIGNED FOR PERIMETER HEATING!

HERE'S WHAT YOU'VE BEEN WAITING FOR! The new Lima Floor Diffuser has a wide but *flat* diffusion pattern that lets you place a spray of warm air in a definite area without smudging walls and ceilings. *Regardless of volume, the pattern stays constant.* Under large windows, or at either side of doors, it counteracts drafts. See Lima catalog for details and specifications.

NEW SMARTNESS, NEW RUGGEDNESS
IN *Lima*
FLOOR
REGISTERS!



A full line of floor registers, each as strong and good-looking as the next! For super strength, Lima combines solid, one-piece, welded steel grids and frames with off-set, "smash" welded corners! For new beauty, Lima features smart new Damogold, a rich, harmonizing finish that presents a handsome gold-hammered appearance (also available in oak grain)! By actual test, Lima Floor Registers show virtually no wear even after 3 years under heavy traffic! Order now!

*Patent applied for

STOCK UP NOW! Immediate shipment on all sizes, wall, floor and baseboard units! Any quantity!

THE *Lima*
REGISTER COMPANY
Lima, Ohio

SEND COUPON FOR FREE DESCRIPTIVE MATERIAL

LIMA REGISTER COMPANY
651 N. Baxter Street, Lima, Ohio

AA-1-51

Gentlemen: Please send me free descriptive material on the complete line of Lima registers and faces for installation in walls, baseboards and floors.

Name

Address

City Zone State

Set your sights on

— and open your eyes to a **BIGGER, MORE PROFITABLE 1951**

SOY THEM WELL, THESE TWO PAGES. They show the extensive line of gravity and forced warm air furnaces—gas conversion burners, too—that KO-Z-AIRE has ready for you.

Start with the bare facts only. A wide array of modernly styled, ruggedly constructed,

Advance Design gas and oil-fired KO-Z-AIRE furnaces in capacities from 70,000 to 450,000 BTU input—a size for nearly every home, small church, school or commercial building—with most models shipped from the factory completely assembled and wired!



140-TV and OV



70-019
70-020



70-018
70-019



70-018
70-019



70-018
70-019



70-018
70-019

KO-Z-AIRE®

Gravity furnaces, Lo-Boy and Hi-Boy winter air conditioners, counterflow furnaces for "Pedimeter" heating—all skillfully engineered for completely automatic, dependable, economical and service-free operation—most all designed for quick, easy conversion from gas to oil or oil to gas.



IT'S YOUR GOLDEN OPPORTUNITY...

you selling your bank on installation bargains with factory assembled units having one-piece, leak-proof welded steel heat exchangers, integrally-designed casings and leak-proof bases—plus removable panels for easy access to blowers, motors and filter.

you selling and servicing the winter warm air heating market with KO-Z-AIRE's fast sold, broad-range range of prices and sizes in both gravity and forced air equipment.

In short, you selling the KO-Z-AIRE line, backed by new factory policies that mean faster, more experienced service and assistance to distributors and dealers—policies which are opening a lot of eyes to this golden opportunity.

So, why be among the late-comers? Set your sights on learning more about KO-Z-AIRE's money-making Progressive Profit Program right now... and join the expanding army of dealers who are enjoying bigger sales and profits selling the KO-Z-AIRE line.

Some Choice Territories Still Open... **Write Today!**

Visit Booth No. 825 at the 1966 International Heating and Ventilating Exposition, January 22-24



KO-Z-AIRE®

KO-Z-AIRE, Inc., Dept. 1, General Offices—Red Oak, Iowa
Factory Representatives in Principal Cities

American Furnace

THE HEATING CONTRACTORS "PROFIT LINE"

Increase Your Furnace Volume . . .

Sell The Line That Assures Success!

You'll do a Better Job with AFCO

The AFCO dealer is certain of a greater share of business because he carries a full line of consumer accepted equipment that leads competition.

The AFCO name plate signifies SOUND VALUE HEATING EQUIPMENT — skillfully engineered and designed to serve today's demands for top performance and appearance.

There is an AFCO unit for every type fuel, built in a range of sizes and models. You can assure your customer of complete satisfaction in any type of installation with AFCO equipment.

Sell AFCO — a leader in the heating field for more than fifty years.

THE AFCO LINE

SPACE HEATERS

Oil or gas fired suspended ceiling units for industrial installations.

Unit Heaters — Gas fired — Vented — Propeller fan forced air type.

GAS FIRED UNITS

AFCO Master Gas Units in Modern Air, Base Blo and Gravity Models with alloy steel heat exchangers.

Thermo Gas Units with sectional cast iron heat exchangers.

Gas Conversion Burners in a range of sizes for the smaller home and larger installations.

OIL FIRED UNITS

Oil Master in Modern Air, Base Blo and Gravity models with pressure atomizing gun type burner.

Vapor-Fire in three models with mechanical draft vaporizing oil burner.

Air Stream in counter flow air circulating design with atomizing gun type oil burner or semi-luminous flame gas burners.

Oil Conversion Burners.

AFCO and THERMO SOLID FUEL UNITS

Gravity and Modern Air Models — Round or square casings. "700" Series — Steel Heating units.

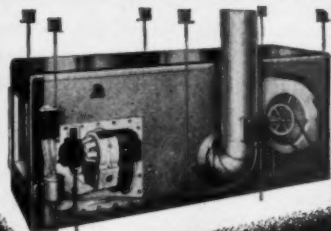
"200" Series — Sectional Cast Iron Pipe and Pipeless models. Stokers.

FOR GREATER DOLLAR PROFIT AND VOLUME

SEND LITERATURE ON AFCO PRODUCTS TO:

NAME _____
ADDRESS _____
CITY _____ STATE _____

AMERICAN FURNACE CO.
1300 HAMPTON AVE. • ST. LOUIS 10, MO.



23-OC



S-100BB



OM-90MA



700MA
SERIES

**FILL OUT AND
MAIL TODAY!**



FOR HEATING AND AIR-CONDITIONING NEEDS, CHOOSE FROM THIS Complete Line of Registers and Grilles

Available in Wide Range of Sizes, Patterns,
Finishes and Metals.



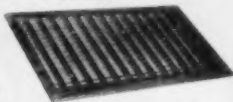
WALL REGISTERS

Available with Lock
Attachment



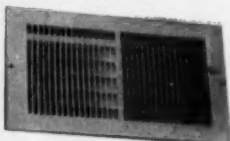
FLOOR GRILLES

Close Mesh

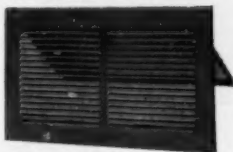


REGISTERS FOR FORCED AIR

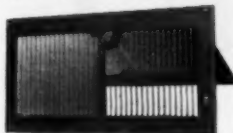
Available with
Matching Grilles



Multiple Valve

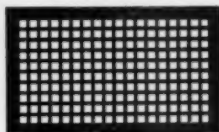


Single Valve



Single Valve

ARCHITECTURAL GRILLES



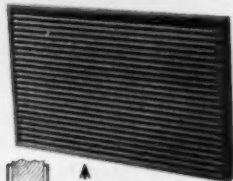
Plain Lattice Designs



Slotted Designs

DIFFUSERS

Double or Single



NO-VISION GRILLES

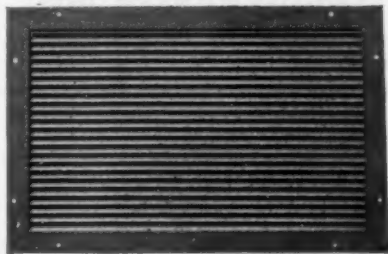
Door or Partition



Auxiliary
flange frame,
slide fit
telescoping.

A-J Introduces the New NO-SITE NO-LITE GRILLE

For Dark Rooms, Laboratories, and Military Uses



775B—This new grille will be demonstrated at the 10th International Heating and Ventilating Exposition, Jan. 22-26, Philadelphia, Pa. Write today for specifications and prices.

**VISIT OUR
DISPLAY
Booth #436**

10th International
Heating and Ventila-
ting Exposition in
Philadelphia,
Jan. 22-26

DEALERS! JOBBERS! Send for Free Catalog. You'll find it most helpful and profitable.

A-J MANUFACTURING COMPANY

2119 WASHINGTON ST.

KANSAS CITY 8, MO.

FIND GREATER PROFITS IN FIFTY-ONE WITH CHRYSLER AIRTEMP'S ALL-YEAR LINE!

Make the new year one to remember—one that starts you on the springboard to real success. Check up now on the opportunities offered by Chrysler Airtemp's all-season line . . . a complete line of heating, air conditioning and refrigeration equipment to sell every month of the year.

You'll find there's added business volume—greater profit for *you*—under the Chrysler Airtemp sign. Here's your chance to sell the nation's most popular "packaged" air conditioner—the world's finest line of heating equipment—dehumidifiers—commercial refrigeration units—room air conditioners.

Every home owner and business man in your town is a red-hot prospect for one or more of the many Chrysler Airtemp products. Yes, sell the finest and you earn the most. Don't wait. There may be a franchise open in your territory. Mail coupon today.

AN ALL-STAR, ALL-SEASON LINEUP:

Gas, Oil and Coal-Fired Winter Air Conditioners • Gas and Oil-Fired Boilers • Oil, Gas and Electric Water Heaters • Conversion Gas and Oil Burners • Coal Furnaces • Year-Round Air Conditioners (Heats and Cools) • Stokers • Filter Blower Units • Electric Air Filters • Room Air Conditioners • "Packaged" Air Conditioners • Dehumidifiers • Commercial Refrigeration • Condensing Units • Central System Cooling Equipment • Marine Refrigeration

MAIL TODAY FOR FULL DETAILS!

Airtemp Division of Chrysler Corporation
Dayton 1, Ohio

Please rush me full details about Chrysler Airtemp's wonderful new year Franchise opportunity.

Name _____

Address _____

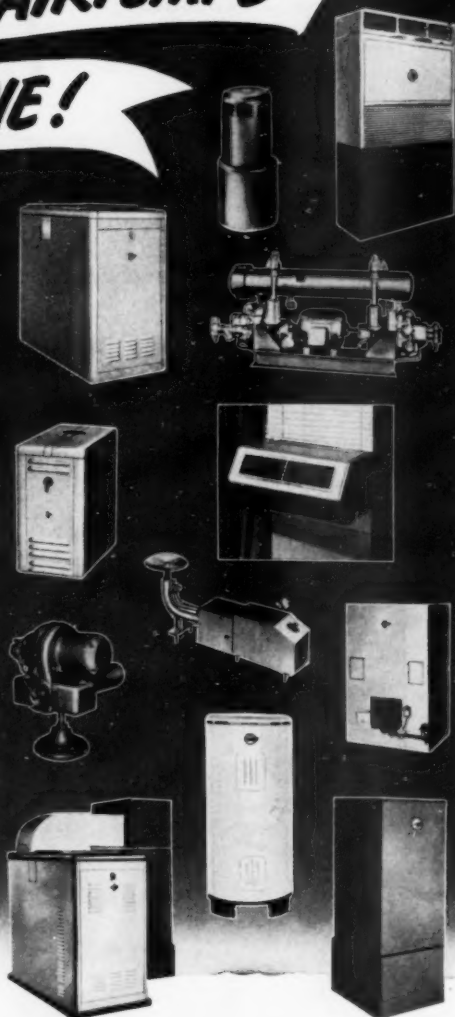
City _____ Zone _____ State _____



Chrysler Airtemp

AIR CONDITIONING • HEATING • COMMERCIAL REFRIGERATION

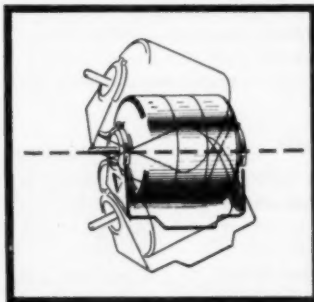
Airtemp Division of Chrysler Corporation, Dayton 1, Ohio



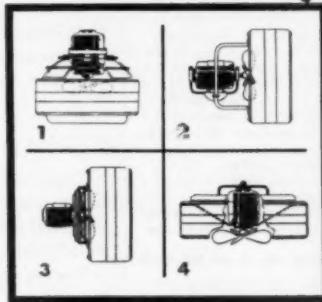
Just Right For Fans



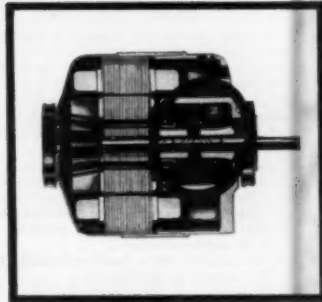
G-E Unit-bearing Motor



Operates at any angle



Mounts four ways



Requires no maintenance

Whatever your mounting arrangements: shaft up, down, or any other position, the unit-bearing, forced lubrication system is dependable—requires no additional oil. Resilient mounting is supplied where noise level must be extremely low. Suitable control also available for two-speed or three-speed operation.

WIDE CHOICE OF RATINGS

Available ratings from 25 millihorsepower to 1/12 horsepower offer wide selection for many fan sizes. G-E sales engineers will be glad to help you select and apply the right motor. Write for more information in bulletin GEA-5338. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

You can put your confidence in —

GENERAL  **ELECTRIC**

700-111



★ ★ ★ ★ ★



You pay money for storage space, so why use it inefficiently? With the Liberty Gas Burner you need only stock one size to handle jobs ranging from 16 inches to thirty inches on your warm air installations. Liberty Gas Burners are rated by AGA from 80,000 to 250,000 Btu. It has a pressurized head that blows the flame directly against the sides of the firebox resulting in maximum use of fuel. If you'll check the following features you'll see why Liberty is your best bet.

1. Liberty patented ignition ring insures instant ignition.
2. Liberty burner telescopes to fit any size furnace from 16" to 30".
3. Liberty pilot is visible for inspection through the feed door.
4. Liberty pilot can be removed without disturbing burner assembly.
5. All automatic controls are enclosed in cabinet to protect them from water and dust.
6. One burner has a heating capacity from 80,000 to 250,000 Btu's for natural or mixed gases.
7. Liberty burner has been tested to insure highest heating efficiency in any type of furnaces.

The Liberty Gas Burner comes complete with Minneapolis-Honeywell controls — and a ten-year replacement warranty is your assurance of our faith in this modern, highly efficient burner.

Write us today for details . . .

DEALERS AND JOBBERS WANTED.
We manufacture various types of burners for unit manufacturers.



NEW LITERATURE

(Use coupon on page 189)

Gas Welding & Cutting Torches 201

A new catalog (Form ADC-702) contains detailed information on gas welding and cutting torches, outfits, tips, and accessories. Extensive charts showing correlation of tip, mixer, extension, and torch contain complete data for each component part — a torch and tip for every job.

Cut away views of the various parts of both welding and cutting torches, as well as welding and cutting pressure charts, make this catalog a valuable reference book. *Air Reduction Sales Co., Div., Air Reduction Co., Inc., New York 17, N. Y.*

Residential Ventilation Guide 202

The Residential Ventilation Guide is a newly compiled booklet covering the use of mechanical ventilation in residences. Information on all phases has been gathered, analyzed, and consolidated into a complete guide.

It is a development of the Attic Ventilation Code, which it supersedes. That subject is again full treated in all of its new developments. A section is also devoted to window fans.

Illustrations are used to clarify the various subjects. Definitions, formulas, examples, and a table of air changes are included.

Propeller Fan Manufacturers' Assn., Detroit, Mich.

Coating Bulletin 203

The practical application of thick protective coatings for tank and duct linings and for protection of equipment and floors is covered in a bulletin on a new coating called Carbo-Kote 6020.

Due to a solids content of 100 per cent, fluid and free flowing during applications, coatings can be applied 12 mils (.012 in.) thick in one application even on vertical surfaces.

Coating hardens at room temperature to a very hard protective film resistant to all acids except oxidizing types, and to practically all solvents and alkalis. While abrasion resistance is excellent, there is sufficient flexibility for steel tank lining service without fiber reinforcement.

Bulletin covers the process of applying Carbo-Kote 6020 on steel and concrete, for which primer coats are required, and on wood, glass, carbon, porcelain, rubber, and stoneware, for which no primer is required.

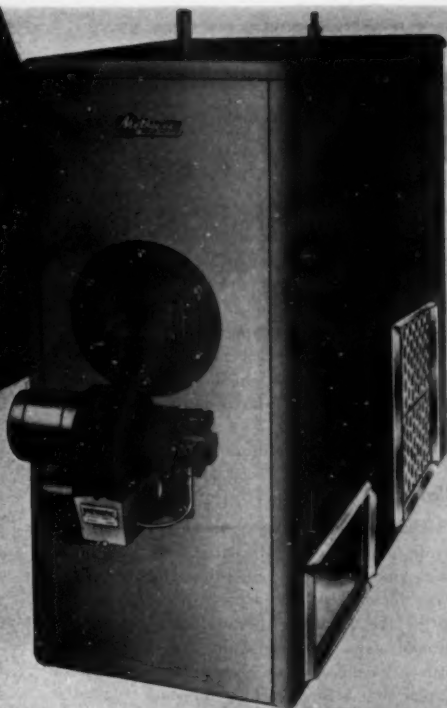
Coverage, drying and working times, corrosion resistance, uses and prices are given in Data Sheet C-42. *Carboline Co., St. Louis, Mo.*

**NOW —
YOU CAN SELL THE
FURNACE OF TOMORROW
TODAY**

Metropac ECONOMY

The newest member of the most advanced line of heating equipment ever developed.

An Engineering Masterpiece — competitively priced without sacrificing an ounce of quality. The Metropac Economy has humidified warm air in Winter plus controlled hot water year round.



MULTIPLY YOUR SALES WITH **Metropac**

Desirable franchises available to preferred dealers

CHECK THESE IMPORTANT FEATURES

- 4 STANDARD CONTROLS
- GUN TYPE OIL BURNER WITH EXCLUSIVE REMOVABLE HEAD
- GLASS FIBER FILTERS
- 2-INCH BRICK FIRE CHAMBER
- HEAVILY INSULATED JACKET
- ATTRACTIVE HAMMERTONE FINISH

70,000 B.T.U. Register Rating



Metropac DELUXE

The ultimate in warm air furnaces

Available in 3 sizes
70,000 B.T.U.
120,000 B.T.U.
180,000 B.T.U. Register Rating



Metropac STRATE-AIRE

For installations where the Metropac hot water feature is not required.

Available in 3 sizes
100,000 B.T.U. Bonnet
140,000 B.T.U. ratings
195,000 B.T.U.

WRITE DEPARTMENT A-1 For Complete Information.

Metropac OIL BURNERS for ENGINEERED HEATING ECONOMY



MODEL 1 B
SHELLHEAD



MODEL 1 B



FLANGE TYPE

Be sure to see
Metropac
ON DISPLAY AT THE
NATIONAL OIL HEAT
EXPOSITION
Philadelphia BOOTH 139

METROMATIC MANUFACTURING COMPANY, EVERETT 49, MASS.

NEW LITERATURE

(Use Coupon on Page 189)

Venting of Gas Appliances 204

A comprehensive, well illustrated booklet deals with the basic requirements for proper venting of gas appliances. It was prepared from research material and field data collected over a period of time from universities, independent laboratories, appliance manufacturers, and gas utility companies. Liberally illustrated and concisely written, new booklet should be of substantial assistance and benefit to all who install, maintain, and operate gas appliances.

William Wallace Co., Belmont, Calif.

Baffle Plates 205

Folder describes and illustrates the Fire-Swirl baffle plate for oil, gas, or stoker furnaces. As the superheated gases rise from the combustion chamber, Fire-Swirl directs them, with a swirling action, against the side walls of the furnace. Because these gases are swirled around and around the walls, they are retained in the furnace longer and can therefore transmit most of their useful heat before reaching the stack. Installa-

tion can be made easily and quickly, with no heat interruption or furnace changes.

Zeh Co., Inc., Passaic, N. J.

Calendar-Reference Tables 206

1951 calendars especially compiled for the trade give information on United States standard revised comparison of wire gauges; expansion and contraction; diameters, circumference, and areas of circles; contents of round tanks; physical properties of metals; sizes of drills to be used for corresponding United States standard taps; slopes of roofs, also weights and measures and useful rules of calculation.

Address requests on company stationery directly to David Levow, 308 W. 20th St., New York 11, N. Y.

Business Booms & Depressions Chart 207

The high spots and the low points of the American economy since 1796 are graphically shown in the 1951 edition of the Business Booms and Depressions chart now being distributed. Several new and timely features have been added to this year's edition including census significance, employment and unemployment, wage rates, retail sales, and per capita income. Of particular interest are indices which show the effect of war production on the nation's economy.

Address requests directly to United States Steel Supply Co., Dept. M.D., 208 S. LaSalle St., Chicago 4, Ill.

GENERAL FUEL OIL FILTERS ARE SURE FIRE

**Deluxe
Model 2A-300**
Jumbo size for large systems or dirty tanks.

**Master
Model 2A-700**
Adequate capacity for average to large size homes.

**Standard
Model 1A-25**
Ideal for small homes, space heaters, and hot water heaters.

A General Filter on every oil burner installation is one way to insure against fires going out due to clogged nozzles. Dirt, due to oxidation, will gradually accumulate in every tank so that the older the installation, the more need for a General Filter. Contact your jobber or write direct to the factory for additional information on sizes, prices, and discounts.

**GENERAL FILTERS
INCORPORATED**

CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO, ONTARIO

12890 WESTWOOD AVENUE
DETROIT 23, MICHIGAN

Specify CONTINENTAL SHEETS

EASY TO WORK
TOUGH TO WEAR DOWN



● Manufacturers and fabricators like the special qualities found in Continental steel sheets . . . the ease with which they can be worked . . . the way they stand up under the most difficult forming operations. Continental sheets have been *proved* in many product uses. For a premium, highly rust-resistant sheet, ask for KONIK. If you need sheets to take and hold fine finishes, you'll like GALVANNEALED or DULL-COAT. COPPER STEEL is noted for rust resistance and workability. Ask your jobber or write Continental. Take advantage of Continental's experience and service—be sure you get the right sheet for your product.

* TR. MKKS. REG. U.S. PAT. OFF.



CONTINENTAL STEEL CORPORATION

GENERAL OFFICES • KOKOMO, INDIANA

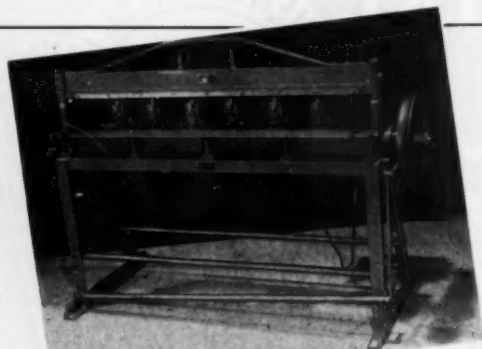
PRODUCERS OF Steel Sheets, including: Continental GALVANIZED, KONIK and COPPER-STEEL culvert sheets.

COPPER-STEEL Galvanized, KONIK steel sheets Galvanized, DULL COAT, Continental GALVANNEALED, ELECTRICAL, Hot Rolled Pickled.

ALSO, Manufacturer's Wire in many sizes, shapes, tempers, and finishes, Continental Chain Link Fence, Nails, and other steel products.

FALLSINGTON SHEET METAL MACHINERY

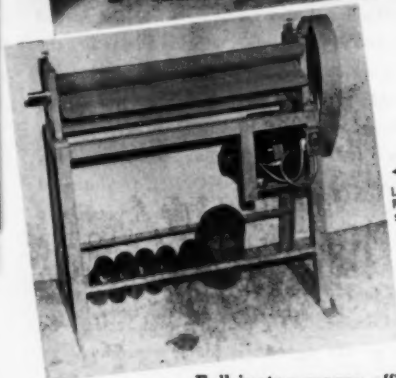
*Designed for the Practical
Sheet Metal Man*



▲ Above: Fallsington Power Driven Multi-Notcher. Available either power-driven or hand operated.



◀◀◀ Left: HX 36 Husky Press.



◀◀◀ Left: PR 36 Roller Power Driven is described below.

Fallsington means efficiency! Illustrated above are just three of the units which will put your shop on a real production line basis. On the Multi-Notcher dies are available for V-notches, Pittsburgh notches, and punching holes. Minimum distance between centers is $2\frac{3}{4}$ ". The Husky press is available in two models, H24" and H36". Bed area is 8" x length of machine. Roller PR 36 rolls smoke pipe or ducts from 3" to 8" without crushing lock on smoke pipe. Lock is first made on the Husky Press. Please write us for more information.

FALLSINGTON MFG. CO., Fallsington, Pa.

NEW LITERATURE

(Use Coupon on Page 189)

1951 Register Catalog 208

All necessary data for sizing and selecting registers, grilles, and ceiling diffusers are included in the technical sections of catalog No. 51.

This well-illustrated 44-page catalog also includes free area, weights, dimensions, and price information.
Hart & Cooley Mfg. Co., Holland, Mich.

The Control Story 209

A new booklet entitled *The Control Story* briefly outlines types and applications of automatic controls in heating, ventilating, and air conditioning systems. Booklet is divided into three sections under the headings Automatic, Pneumatic, and Electric Controls, each section including line drawings and diagrams to illustrate various applications.

Barber-Colman Co., Rockford, Ill.

Thermostat Heater Selector 210

A unique slide rule selector to aid in choosing the proper heater for every thermostat replacement job is currently available. Recommends, on one side, heaters for use with Honeywell primary controls and on the other, heaters for use with controls of other manufacturers. It can also be used for trouble shooting where the burner is not cycling properly.

Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

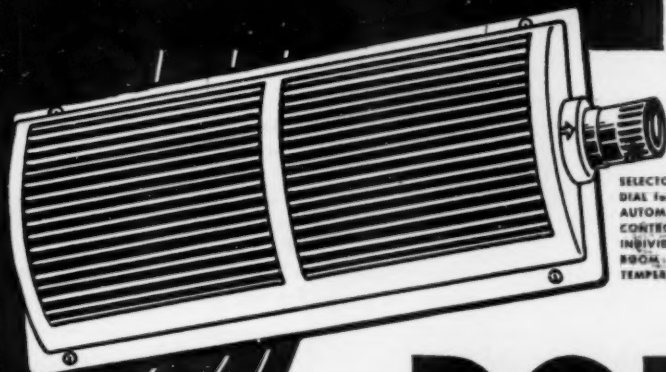
Blower Wheel Data Catalog 211

A new 48-page catalog entitled *Torrington Airotor Blower Wheels* gives full specifications and performance charts on several new models and features the recently perfected Coasting Hub. The Coasting Hub, developed for manufacturers of pressure-atomizing oil burners, eliminates after fire problem which has been considerably intensified by today's use of harder-to-burn catalytic oils. It provides practically full air delivery during the first few seconds after pump and motor stop, so that shutdown is accomplished without soot, smoke, shudder, or carbonization at the nozzle.

Catalog gives complete data for all sizes of blower wheels so that users have a thorough guide to proper use and selection. Detailed graphs showing performance at varying horsepower and rpm, how to house the blower properly, what scroll dimensions are most efficient, and innumerable other kinds of technical and engineering information enable the manufacturer of air moving equipment to choose the correct Airotor needed for maximum efficiency and advantage, whatever his product.
Torrington Mfg. Co., Torrington, Conn.

show your customers how
TO SAVE FUEL

(and ALSO enjoy greater heating comfort)



SELECTOR
DIAL for
AUTOMATIC
CONTROL OF
INDIVIDUAL
ROOM
TEMPERATURE



with **DOLE**
THERMOSTATIC
AIR CONTROLS

for Forced Warm Air Heating Systems

Whatever the fuel — the need to conserve it is *again* URGENT . . . and everyone knows this. Your customers will listen attentively when you tell them that the Dole Thermostatic Air Control System saves fuel — *It's the greatest advance in home heating since automatic firing.* Automatically, Dole Thermostatic Air Controls prevent overheating of individual rooms and send heat quicker to the rooms that really need it. Installs quickly . . . and is the simplest, easiest way for the service man to balance the whole system once and for all. Dole air controls replace standard registers. The market — *a big one* — is wide open for you. Cash in on this good profit line NOW.

THE DOLE VALVE COMPANY

1933H Carroll Avenue

Representatives in Principal Cities

Chicago 12, Illinois

Control with

Also Air & Vacuum Valves for Steam Systems, Hot Water Air Valves, Water Mixers, etc.

SALES SENSE

By Jack Bedford

Selling is getting easier according to some salesmen—but is it? Selling is still giving customer's what they want and with shortages developing in some lines selling is getting more difficult. Shortages give the salesman the upper hand, but as we all know the pendulum will swing the other way some day. Using the upper hand carefully now will mean more business in the future . . . Happy customers always return.

\$ \$ \$

Footprints on the sands of time are not made by sitting down.

\$ \$ \$

"Hello," said the boyish voice over the telephone. "Is this the Society for the Prevention of Cruelty to Animals?"

"Yes."

"Well, there's a salesman sitting in a tree in our front yard and he's got my dog so excited he can't eat."

\$ \$ \$

Speech is like a wheel—the longer the spoke, the greater the tire.

"Courtesy," said the Salesman's Sage, "doesn't cost a thing. Use it generously."

\$ \$ \$

A pedestrian has been defined as a car owner who has found himself a parking space.

\$ \$ \$

Heard about the man who claimed he went forty-four days without food? Salesman San said that he should have either given his order to another waiter, or have tired a different restaurant.

\$ \$ \$

With some people you spend an evening—with others you invest it.

\$ \$ \$

A salesman shouldn't worry about what people are thinking about him for people are not thinking about the salesman, but wondering what the salesman is thinking about them.

\$ \$ \$

Socrates once said that the most exquisite of life's pleasures is release from pain.

\$ \$ \$

Heard about the girl who had been married five years and still had her figure—doubled?

\$ \$ \$

Sales efficiency has been defined as the sum of three qualities—Purpose, Practice, and Patience.

Look to...



For all these plus features!

Compact, space-saving design with attractive baked-on enamel finish • Finest automatic controls and efficient operation insures desired even warmth in winter • Engineered to provide refreshing air circulation in summer • Extra heavy, strong construction • Longer travel of products of combustion assure more heat output with valuable savings in fuel bills.



Originators of furnaces with the built-in Electrostatic Air Cleaner

STANDARD KLEEN-AIRE (right) without electrostatic air cleaner, which may be installed in the furnace at a later date. Available in various sizes and capacities.

ELECTRONIC KLEEN-AIRE (below) with built-in precipitator, cut-away view. Available in sizes and capacities for every home.



Exclusive Dealerships Available!
Write for details.

• The heating element in all KLEEN-AIRE Furnaces is guaranteed for 10 years!

Let An
Atlas
CABINET
SELL YOUR
FURNACE



Attractive furnace cabinets are a necessity in our modern day living, where the basement recreation room shares equal popularity with the front parlor. Atlas furnace cabinets have streamlined, rounded edges; modern hardware and are beautifully colored in hammerloid, wrinkle or plain baked enamel finishes. They enhance the compact, modern design of the popular basement amusement room.

Traditional metal, screw and bolt assembled cabinets consume several times the installation hours that the Atlas cabinet requires. For there are no bolts or screws in an Atlas "tailormade" cabinet. It "fits together" smoothly and simply...which is a big selling point for your dealers!

Lower installation cost in the field is due to this better system of construction. It is labor-saving...cost-saving, because an Atlas cabinet is easy to assemble.

Atlas cabinets will appeal to you we know; for the combination of the above features means increased sales for you without hazarding increased overhead expense. And remember, Atlas "tailormade" furnace cabinets means they are...

Specification built to suit the desires of your market, and the demands of your particular furnace models. They will carry, of course, your name, trademark and other identifying features; and not that of Atlas.

Send Your Furnace Specifications
for Cost Estimates to:

Atlas
MANUFACTURING
COMPANY

East St. at Robbins St. Saint Paul 4, Minn.

OT*

CEMAN SAYS —



"NAW!
I'm not lazy ...
just smart!"

"Why beat my brains out trying to service fuel units when I can use Webster Electric Fuel Units and do it the clean, simple and easy way. 'Leisurely servicing', I call it. Everything is simplified. I don't need crates of tools and on top of that I save time. Naw! I'm not lazy but smart enough to choose the easy and efficient way to do things. It starts by specifying and using Webster Electric Fuel Units. If you want to profit by my experience ... get smart ... specify WE Fuel Units for replacements and recommend them on new equipment too."

These Fuel Units are made by Webster Electric Company, Racine, Wisconsin, Established 1909.

"Old Timer"

WEBSTER ELECTRIC
RACINE • WISCONSIN

"Where Quality is a Responsibility and Fair Dealing an Obligation"

INDUSTRY ITEMS

L. A. CASLER, Chicago advertising executive and public relations counsel to the Oil-Heat Institute of America, was elected to the board of directors of the Eureka Williams Corp., it was announced following a board meeting in New York.

Mr. Casler is president of the firm of Casler, Hempstead and Hanford, Inc., Chicago, Rochester and New York, who are advertising representatives for Eureka Williams.

Also elected to the corporation's board of directors were: F. A. Daum, New York; M. L. Schafer, New York; Harry Diamond, partner in the New York investment firm of Diamond, Turk & Co.; and Fordyce Tuttle, general superintendent of development and engineering and of Navy ordnance division of the Eastman Kodak Co. Rochester, N. Y.



L. A. Casler



John Farrar

THE APPOINTMENT OF JOHN FARRAR as assistant sales manager of the Mor-Sun furnace division of Morrison Steel Products, Inc., Buffalo, was announced by Gene Brown, sales manager.

Mr. Farrar's appointment is a promotion from the position of manufacturer's sales representative of the Mor-Sun division which he has held since the beginning of 1950. A graduate of Ohio State with a degree of B. Met. E., which he received in 1939, Mr. Farrar, has been sales manager of the Crise Mfg. Co., and sales engineer of the Eagle Picher Sales Co. succeeding his discharge from the Navy in 1945.

His duties at Morrison Steel Products, Inc., will be to assist Gene Brown, the sales manager, in the field contact work. Mr. Farrar is married, has two children, and is establishing his home in Buffalo.

AUTOMATIC PRODUCTS CO., of Milwaukee has announced a change in the name of its corporate title. The company will now be known as the A-P Controls Corp.

According to E. A. Vallee, executive vice president of the corporation, the new name has been adopted to reflect more accurately the actual nature of the products manufactured.

The firm manufactures a wide variety of controls for gravity-fed oil burners and is the largest manufacturer

of oil-level control valves for space heaters.

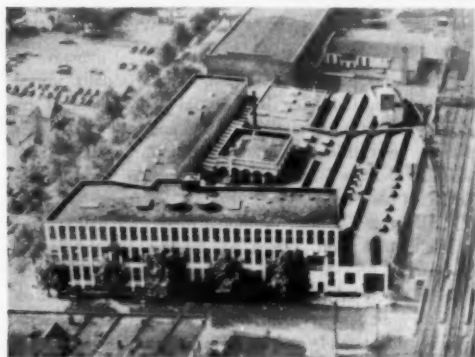
In addition, new types of controls for gas furnaces and heaters have recently been developed by the company.

Acquisition of a Canadian plant was recently announced, and this will be operated under the name of A-P Controls Corp., Limited.

J. A. KENWORTHY has been employed by the Chicago sales district of Perfection Stove Co. to cover 20 counties running from the central part of Indiana, through to the Illinois line.

For the past several years, Mr. Kenworthy's employment has taken him in contact with dealers, especially in the plumbing, heating and hardware trades. Formerly a manufacturers' agent, he also was engaged in sales work for Stewart-Warner Corp., the General Supply and Tool Co., in Indianapolis, and the Van Camp Hardware & Iron, also of Indianapolis.

IN SHIFTING ITS GENERAL OFFICE and plant to Plainfield, N. J., Chelsea Fan & Blower Co. facilities now cover an additional 90,000 sq ft of manufacturing and assembling space. Complete with railroad sidings connecting to main lines, Chelsea operations are strategically located to expedite shipments to all parts of the country by rail, fast motor freight and air-express when required.



Chelsea Fan factory

W. J. Lohman Jr., president of the Chelsea organization, states that while working area has been tripled, the efficiencies effected in the new assembly lines actually provide more than four times previous production. Service to distributors and dealers on shipments will be stepped up considerably, an important factor in intensive seasonal sales of Chelsea cooling equipment.

In addition to betterment of production facilities, Chelsea has emphasized new laboratory and research equipment, broader testing methods and techniques and improved inspection procedure to provide stricter control of quality and adherence to Chelsea factory ratings.

LIVINGSTON, INC., Marshall, Mich. has announced the purchase of the original pattern equipment for American furnaces as manufactured by the American Furnace and Foundry Co., Milan, Mich. In addition to the patterns

OT* SERVICEMAN SA



"Just like that.
Compact...
Neat and Trim!"

"There's one thing about Webster Electric Transformers—they really fit in with smart-appearing equipment—neat, compact and still easy to get at... a bit smaller than usual too. This adds up to giving my customers a nice looking job—and believe me, that's important—then add the excellent performance features I always get and you have another good reason why I have specified Webster Electric Transformers for many years. If anyone wants to profit by my successful experience, I'd say, 'just specify Webster Electric the next time you order.'"

Webster Electric transformers are made by Webster Electric Company, Racine, Wisconsin, Established 1909.

"Old Timer

WEBSTER  **ELECTRIC**
RACINE ♦ WISCONSIN

Where Quality is a Responsibility and Fair Dealing an Obligation

Here's Modern Equipment to MAKE FURNACE-CLEANING CALLS PAY OFF!



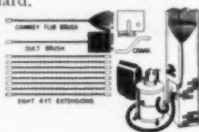
G-E AVI-F908 FURNACE CLEANER a Powerful BLOWER-SUCTION Machine-engineered to do the job Quickly, Thoroughly and at Low Cost

This easy-to-handle, high-vacuum cleaner (1 full h. p. AC-DC; weight only 51 lbs.) makes a hit with clean-up crews . . . steps up their productivity . . . leaves boilers and cellars cleaner.

Power unit is readily removed from tank and converted into a powerful BLOWER, by removing bag and substituting special coupling and guard.

G-E CHIMNEY-CLEANING AND AIR-DUCT EQUIPMENT
For Use with Model AVI-F908
Furnace Cleaner

Another ingenious contribution to speed clean-up jobs is the G-E Chimney-Cleaning Set. This equipment brings down the soot and gets it into the machine with a minimum of muss and fuss. Revolving handle and vacuum hose fit through special shield which keeps falling soot from escaping into the cellar. As shown, set includes Shield, Crank, Chimney Flue Brush, Duct Brush and eight 4 ft. extensions.



YOUR FIRST STEP toward Lower Furnace Cleaning Costs and MORE Satisfied Customers is taken when you mail coupon below for this new G-E folder



Furnace and Boiler Cleaners

GENERAL  ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-4117,
1285 Boston Ave., Bridgeport 2, Conn.

Certainly, I'm interested in more efficient Furnace Cleaning Equipment. Send the G-E Folder by return mail.

Name

Firm

Address

City

Zone

State

the remaining stock of castings was also purchased.

Original pattern equipment for American, Rudy, Simons-Leedle, and Taplin furnaces is now owned by Livingston. Repair parts can be supplied for Marshall, Caloric, Home, Kalamazoo, Peninsular, Jewel, Laurel, Garland, Ideal, Homer, Agricola and other makes.

PROMOTIONS IN THE ARMSTRONG Furnace Co. organization have been announced by D. H. Kinnan, Armstrong president.

L. G. Hickok has been promoted to executive vice president. Mr. Hickok joined Armstrong in 1943, with an extensive background in various phases of furnace sales and manufacturing. As executive vice president, he will be especially concerned with supervision of sales, merchandising and new territory development.



L. G. Hickok



W. J. Olsen

W. J. Olsen has been promoted to general manager of the Columbus plant. Mr. Olsen, who originally joined Armstrong in 1940, has had a total of 18 years of experience in furnace manufacturing and sales. He has recently been absent from Armstrong for a short time, during which he organized and managed the Buckeye Furnace Pipe Co.

N. H. Deck has been promoted to factory manager of the Columbus plant. Deck has been well schooled in the manufacture of sheet metal products by long experience in the aircraft industry. Prior to his promotion to factory manager, he developed a knowledge of Armstrong products and production procedures as production engineer of the Columbus plant.



N. H. Deck



H. C. Galleher

H. C. Galleher has been named advertising manager. Previously vice president of Kight Advertising, Inc., he had for the last two years handled the Armstrong account for that firm. In his new position, he will be in charge of Armstrong's advertising and sales promotion programs.

S. H. Levine, district manager, has been transferred to a new sales district. Mr. Levine has managed Armstrong's southern territory since January, 1950. In his new assignment, he will serve Armstrong jobbers in western New York, western Pennsylvania, eastern Ohio and northern West Virginia.

An engineering graduate of the University of Michigan, Mr. Levine attended Harvard University's graduate school of business, receiving his master's degree in business administration in 1949, just prior to joining Armstrong.



S. H. Levine



Peter Cheli

PETER V. CHELI was recently appointed as manager for the Chicago branch office of Bryant Heater Div., Affiliated Gas Equipment, Inc. The announcement from Bryant headquarters in Cleveland, reported that Mr. Cheli succeeds William H. Wise, who has joined the home office organization as assistant to J. N. Crawford, director of sales.

Mr. Cheli began his association with the gas industry in 1934 when he joined the sales organization of the Peoples Gas Light and Coke Co. in Chicago. At the outbreak of World War II he was called to serve with the War Production Board and later the War Assets Administration. In both agencies Cheli held top level administrative positions.

Upon completion of the above assignments, Mr. Cheli joined Bryant's Chicago branch in August of 1949. He will assume his position in the company's new offices at 1454 W. Randolph St.

Jesse G. Weatherall, Sr., 64, retired sheet metal contractor, died in Memphis, Tenn., on December 13.

Mr. Weatherall was in the sheet metal business for 40 years and had been a partner in the E. C. Kelly Co. He retired 2 years ago. Born in Mississippi, he had resided in Memphis for 57 years.

MAID-O'-MIST, INC., Chicago, manufacturers of automatic humidifiers and steam and hot water heating specialties, are expanding their manufacturing facilities and building an addition to their factory to increase production space approximately 25 per cent.

PERFECTION STOVE CO. will start the year 1951 with F. J. Rudolph as head of its Kansas City, Mo., sales district. He replaces W. J. Bruce, who has held the post since 1944 and who retired December 31st.

Since 1913, Mr. Rudolph has been associated with the

The Name **BARBER** is an Emblem of Quality in a **Gas Burner**



Barber 324-B round Conversion Burner with improved controls, excess in streamlined hood. Tested and certified by AGA Laboratory under new listing requirements.

Barber Appliance Burners, in numerous designs, have long been standard equipment in hundreds of outstanding gas appliances. Barber is thoroughly experienced in the design, testing and manufacture of such units, and will accurately adapt the burner (which is the heart of the appliance itself) to the specific purpose and the type of gas used. For over 30 years the Barber name has represented a high standard of excellence in gas burners.

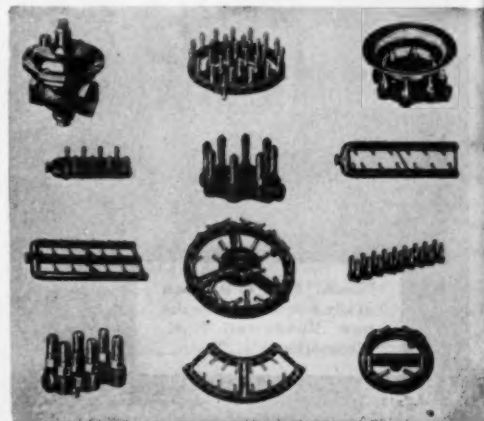
Also, Barber Automatic Gas Conversion Burners, in round or oblong types for all furnaces and boilers, can be relied on for the utmost in performance. Equipped with our exclusive air-activated jets, they produce a very high intensity flame, applied directly to the combustion chamber. No other burner burns like a Barber. For top efficiency and dependable operation, use Barber Burners in the gas appliances you recommend or sell.

Write for latest Catalog showing all models of burners for Appliances, also Conversion Burners, Regulators and Controls.

THE BARBER GAS BURNER CO.

3704 Superior Avenue

Cleveland 14, Ohio



This Simple Idea Brought Me an Extra \$500 Last Year!

(A composite true story of how many dealers—some of them shown on the opposite page—are adding to their incomes.)

It all boils down to six short words—I tell 'em and sell 'em!

Of course, I build up to it. Like this:

Whenever I bid on a conversion burner or a new heating plant, I figure on a plain thermostat. That way, I'm sure my price is competitive.

After I get the order, while my customer's in the mood to think about heating, I come up with this idea that's making me extra money.


"Look," I say to the man of the house, "This is the new Honeywell T.M. Chronotherm . . ."

That leads me into my story. I tell him how it will make his heating system *completely* automatic. How he'll have a nice warm home to get up in every morning. How he'll save enough on fuel to make up the slight extra cost of the Chronotherm.

That's all there is to it—it takes only 3 or 4 minutes! And my records show that it *works* . . . better than 60% of the time!

It pays off in folding money, too! I've already made enough extra to buy a new console TV set and a couple of good suits. Next year, my wife gets a new fur coat, thanks to the simple fact that . . .

I TOLD 'EM AND SOLD 'EM! Why don't *you*!



"Look," I say to the man of the house, "This is the new Honeywell T. M. Chronotherm . . ."

MINNEAPOLIS
Honeywell
First in Controls

marketing of Perfection products. He worked for Standard Oil Co. of Indiana in the days when that organization was distributing Perfection kerosene products to all corners of the world. Following World War I, Rudolph transferred to the Perfection sales staff. Soon after, he was named sales supervisor for the Kansas City District.

Brought to the company's Jersey City, N. J., district in 1931 to assist in the training of new salesmen, Rudolph later was named chief clerk and office manager of the district, under Manager B. J. Greenough. Just a few months ago he returned to Kansas City as assistant to Mr. Bruce.

SEPARATION OF the Ingersoll Steel Division of Borg-Warner Corp. into two distinct and independently operated manufacturing units was announced recently following a meeting of the division's Board of Supervisors.

One unit, which will continue to be known as the Ingersoll Steel Division, with steel mills at New Castle, Ind., will be headed by Harold G. Ingersoll as president and general manager.

The other division, with plants in Chicago and Kalamazoo, Mich., will be directed by Robert S. Ingersoll as president and general manager and will bear the name of the Ingersoll Products Division.

Other newly elected officers of the Ingersoll Products Division are J. A. White, vice president and Chicago works manager; R. A. Anderson, vice president and Kalamazoo works manager; W. K. Eaton, vice president in charge of sales; A. P. Zetterberg, secretary; and H. A. Schmeal, treasurer and assistant secretary.

The growth of the original steel division's business and the dissimilarity of many of its present-day products made the creation of two separate manufacturing groups advisable for sake of increased efficiency, it was stated. Among the products of the Kalamazoo plant are domestic warm air furnaces, automobile body stampings and forgings, agricultural implement parts, and storm windows.

MONOGRAM PRODUCTS CO., INC., manufacturers of Lite-Cast combustion chambers, have announced the purchase of new grounds, facilities and buildings, which will enable them to double their production of combustion chambers in 1951. This new Union St. plant is located nearby their present main plant and office at 731 N. 35th Street, Philadelphia 4, Pa.

EXPANSION OF ITS SALES ORGANIZATION in the heating and commercial divisions has resulted in promotions for seven members of the Minneapolis-Honeywell Regulator Co.'s sales departments, it has been recently announced.

Arthur H. Lockrae, vice president of the heating controls division announced the following new appointments: R. M. Locke to assistant sales manager, wholesale division; J. C. Dorsey, sales manager, manufacturers' division, mid-Atlantic region, Philadelphia; H. S. Gray, sales manager, wholesale division, mid-west region, Chicago; W. E. Dobie, sales manager, wholesale division, eastern region, New York, and R. G. Hayes, sales manager,




It's a Hot Idea— a Real Money Maker!

say these dealers who are
telling 'em and selling 'em!



"Chronotherm sales have been *booming* since our organization made it a point to mention the advantages of Chronotherm to each prospective customer!"


Earl and Edgar Lehman
Lehman Heating and Plumbing Co.
Berne, Indiana



"We are telling our customers about the Honeywell Electric Clock Thermostat every time . . . and we are selling over 70% of our jobs with the Electric Clock Thermostat!"

Dale Popp
Gas Heating, Inc.
Lansing, Michigan

"Our servicemen and salesmen explain the savings and the greater comfort with the Honeywell Electric Clock Thermostat . . . and better than 60% of all our installations are now Chronotherm equipped!"



Kenneth Lensing
A. W. Lensing Sons, Inc.
Oak Park, Illinois

MINNEAPOLIS-HONEYWELL REGULATOR CO.
Dept. AA-1-05
Minneapolis 8, Minnesota

Please rush me sales literature about Chronotherm that will help *me* tell 'em and sell 'em, too!

Name

Firm Name

Address

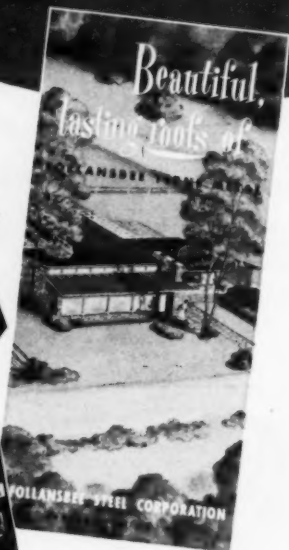
City State

Increase Your

Roofing Profits!

Sell —BEAUTIFUL, LASTING
ROOFS OF
FOLLANSBEE TERNE METAL

the booklet
designed to
help you get
profitable
roofing
business



the leaflet
prepared to help you
make more money
on Weathersealing

Follansbee's continuing national advertising and promotion program is designed to help you sell Follansbee Terne Roll roofing. Put the program to work for you. Write on your business letterhead for your copies of "Beautiful Lasting Roofs" and "Weathersealing".

Address: Follansbee Steel Corporation, Dept. BT, Pittsburgh 30, Pennsylvania.

FOLLANSBEE STEEL CORPORATION

GENERAL OFFICES: PITTSBURGH 30, PA.

COLD ROLLED STRIP • ELECTRICAL SHEETS • POLISHED BLUE SHEETS

SEAMLESS TERNE ROLL ROOFING



Sales Offices—New York, Philadelphia, Rochester, Cleveland, Detroit, Milwaukee, Sales Agents—Chicago, Indianapolis, Kansas City, Nashville, Los Angeles, San Francisco, Seattle, Toronto and Montreal, Canada.

Plant—Follansbee, W. Va.

FOLLANSBEE METAL WAREHOUSES

Pittsburgh, Pa. • Rochester, N. Y. • Fairfield, Conn.

wholesale division, mid-Atlantic region, Philadelphia.

For the commercial division, vice president John Haines announced that R. H. Jacobs will be transferred to Minneapolis to take charge of market development activities and that Ralph Cryslar also will be transferred to the home office as manager of the commercial division's technical group.

Mr. Locke will coordinate the heating controls division's activities in the field with particular application during the next year to the area east of the Mississippi River. He will continue to make his headquarters in Chicago. Locke joined Honeywell's Milwaukee office in 1945 as a heating controls salesman and was transferred to Chicago early in 1949 as mid-west regional manager for the wholesale division.

Dorsey joined the company in 1920 in Philadelphia. In 1945 he became an account executive in the heating controls division. He will continue to work out of Philadelphia. Gray started in Chicago in 1946 as a junior salesman and became a senior salesman this year in the Chicago office.

Dobie started in the Detroit office as a junior salesman in 1947 and early this year was made a senior salesman in the New York City office. Hayes also started as a junior salesman. He joined the company in Boston in 1946 and later moved to Providence. This past year he has been in the home office heating controls division.

Jacobs joined Honeywell in 1944 at the Milwaukee office as a salesman for the commercial division. Most recently he has been market supervisor of the school controls division and will continue in that capacity in addition to his new responsibility as chief of market development.

Cryslar has been with Honeywell since 1933. He has served as installation manager in the Twin Cities and in Chicago and was later installation manager for the mid-west region and Chicago office sales manager for the commercial division. In his new position, Cryslar will be responsible for technical application data, statistics, service and installation policy, system application tests, performance requirements for engineering developments, certain training programs and production forecasting.

THE NEW YORK OFFICES OF W. B. Connor Engineering Corporation, Danbury, Connecticut, manufacturers of Dorex activated carbon air purification equipment and Kno-Draft adjustable air diffusers, are now at 500 Fifth Ave., New York 18, N. Y.

NEW ASSIGNMENT OF TWO district sales managers for Servel, Inc., the nation's largest manufacturer of gas equipment and appliances, has been announced by John K. Knighton, Servel's general sales manager.

Byron A. Bliven, formerly sales manager in a district including parts of Indiana, Illinois, Kentucky and Tennessee, becomes district sales manager for South Carolina, North Carolina and all of Florida except the northwestern section. His headquarters is in Miami.

Warren Thompson, previously a sales representative in

Servel's Evansville sales branch, takes over the district formerly assigned to Mr. Bliven. His headquarters is in Evansville.

Mr. Bliven joined Servel in 1936 as a sales promotion representative. He became a district sales manager in May, 1950.

Mr. Thompson, who came to the company in 1940, under its cadet training program, has been assistant to the sales manager of the Household Refrigeration division and appliance sales specialist and dealer manager. He became a sales representative early in 1950.

FRED J. LAUGHNA, formerly Chicago regional manager, has been appointed administrative assistant to the vice president of Airtemp Div. Chrysler Corp., Dayton, Ohio. Announcement was recently made by Chester S. Stackpole, Airtemp vice president and general sales manager.

At the same time Mr. Stackpole announced the appointment of Homer D. Day, formerly Boston regional manager, as manager of the Chicago region and Taylor U. Cowger, formerly special representative in the Dallas region, as manager of the Boston region.

A native of Detroit, Laughna joined Chrysler in 1933 as a clerk in the factory time office. By 1947, when the plant had increased its postwar production of heating, air conditioning and commercial refrigeration products, Laughna was manager of the Dayton region. In 1948 he was transferred to Detroit as regional manager and later was named manager of the Chicago region.



F. J. Laughna



S. V. Borthwick

Mr. Day, a native of Chicago, joined Chrysler in 1940. In 1946 he moved to the Airtemp division as a district representative in the Dayton region, later becoming manager of that region. In 1947 he was named manager of the St. Louis region. This year he was transferred to Boston as regional manager.

A native of Iowa, Mr. Cowger joined Airtemp in 1947 as a district representative in the New Orleans region. In September of the same year, he was promoted to manager of that region.

In 1949 he returned to the home office to become sales manager of Stokol Stoker Company, a subsidiary of the Chrysler Corp. He later became a special representative, a position he has held until his present appointment.

Stuart V. Borthwick has been named district representative for the division's Cleveland region.

Prior to joining Chrysler Airtemp, Borthwick was Cleveland representative for the American Standard

Increase Your
Roofing Profits!

**Sell - FOLLANSBEE TERNE
METAL ROOFING**

THE *Lifetime* ROOFING

Builders and owners of homes get maximum roofing protection when you sell them Follansbee Terme Metal roofing. Tell your prospects about the advantages of Follansbee Seamless Terme:

- ★ Colorful and Attractive
- ★ Permanent
- ★ Weathertight
- ★ Fireproof

and tell them, too, how Follansbee Terme Roofing adds lifetime beauty to any home:



BIG

OR

LITTLE



Follansbee's literature will help sell your prospects on the beauty, utility, and desirability of a Terme roof for their homes. Get your copies of "Weathersealing" and "Beautiful Lasting Roofs" now.

Write Follansbee Steel Corporation, Dept. BT, Pittsburgh 30, Pennsylvania.

FOLLANSBEE STEEL CORPORATION

GENERAL OFFICES: PITTSBURGH 30, PA.

COLD ROLLED STRIP • ELECTRICAL SHEETS • POLISHED BLUE SHEETS

SEAMLESS TERNE ROLL ROOFING



Sales Offices - New York, Philadelphia, Rochester, Cleveland, Detroit, Milwaukee, Sales Agents - Chicago, Indianapolis, Kansas City, Nashville, Los Angeles, San Francisco, Seattle, Toronto and Montreal, Canada.

Plants - Follansbee, W. Va.

FOLLANSBEE METAL WAREHOUSES

Pittsburgh, Pa. • Rochester, N. Y. • Fairfield, Conn.

HERE'S WHY...

You'll be money ahead purchasing

HARDWARE

"all from  source"

simplified purchasing • complete selection
lower shipping costs • simplified control
uniform high quality • prompt delivery

Ask about our
complete line of...

**HANDLES
CATCHES
HINGES
SCREWS and BOLTS**

suitable for use on...

- SPACE HEATING UNITS
- AIR CONDITIONING EQUIPMENT
- OIL BURNERS
- STOKERS
- GAS HEATING UNITS
- HUMIDIFIERS



WRITE US FOR FULL INFORMATION

NATIONAL LOCK COMPANY

ROCKFORD • ILLINOIS

Corp., and sales engineer for the Cyril Bath Co., Cleveland. He is a licensed chief engineer and holds a Commander rating in the Maritime Service.

W. B. JOHNSON, formerly assistant advertising manager of the John F. Jelke Div. of Lever Brothers Co., Chicago, has been named assistant advertising manager of heating equipment, Ingersoll Steel Div., Borg-Warner Corp., Kalamazoo, Mich.

Paul J. Fetzek, formerly sales engineer, Heating Controls Div. Minneapolis-Honeywell Regulator Co. was recently appointed chief sales engineer, heating equipment.

Joseph Bauer, new assistant sales engineer with Ingersoll was formerly with the Duncan Electric Mfg. Co. of Lafayette, Ind.

Lawrence Hodge, formerly with Petroleum Heat and Power Co., Stamford, Conn., will be a sales representative for heating equipment, covering western Pennsylvania and Ohio.

James Neall is a new sales representative in Indiana and Michigan. Mr. Neall was formerly with Minneapolis-Honeywell.

H. Forrest Oakes has recently been appointed mid-western sales representative for heating equipment, Ingersoll Steel. Mr. Oakes has been engaged in the heating industry for the past fifteen years in various sales and advertising capacities.

*a real profit
for you*

ATH-A-NOR

When you sell Ath-A-Nor coal furnaces you get profits plus—you pay less for Ath-A-Nor coal furnaces than any other—you have fewer service call backs—and you have more exclusive selling features including the famous fuel saving Ath-A-Nor Air Blast. Ath-A-Nor is quality proved for over 50 years.

Coal Gas & Oil Furnaces & Parts

MAY-FIEBEGER COMPANY

MANUFACTURERS OF QUALITY HEATING
EQUIPMENT FOR OVER 50 YEARS

Newark

Ohio

Tri-Flex . . . Aerovane

..In the Crowell-Collier Building

Styled in the best traditions of contemporary architecture . . . designed throughout for utmost efficiency . . . this modern home of the world-known publishers of *Colliers*, *Woman's Home Companion*, and *The American Magazine* is the latest addition to the New York skyline . . . and like so many other important air conditioned installations from coast to coast, Tri-Flex and Aerovane Grilles and Registers were selected to insure maximum, flexible control of air delivery . . . to meet the most exacting requirements of performance.

Tri-Flex FOR SUPPLY

Aerovane FOR RETURN

STARRETT BROTHERS & EKEN
Builders

LEONARD SCHULTZE & ASSOCIATES
Architects

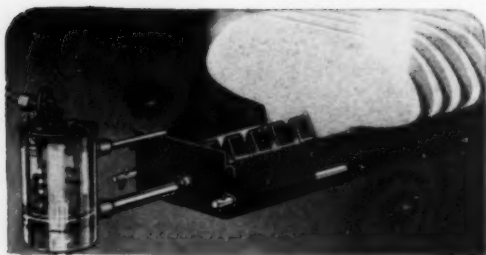
EDWARD E. ASHLEY
Consulting Engineers

ALVORD & SWIFT
Heating and Air Conditioning Contractors

TUTTLE & BAILEY inc



NEW BRITAIN, CONNECTICUT



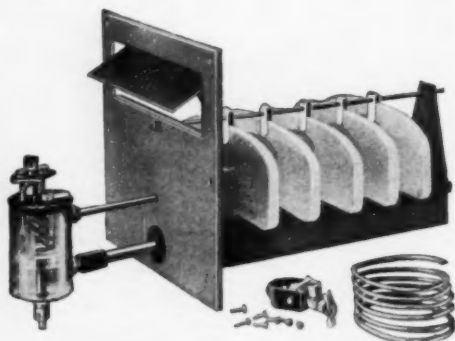
MONMOUTH FLOTROL

The Finest HUMIDIFIERS You Can Buy

See the Special "310" Series!

• The "310" (Illustrated below) is designed especially for modern smaller furnaces and air conditioning units, up to 100,000 BTU capacity. Monmouth ceramic diffusion plates (new style). Heavy seamless copper pan. Shipped completely assembled—a 1-package product, nothing to put together, nothing else to buy. Quickly installed from outside the furnace. All you need to do is cut your hole, make water connections, attach access plate (containing combination inspection door and plenum register) to plenum and level the pan with adjusting screw from the front. Register has pivot shut-off valve and equals an 8" x 4" register in free area. The whole front access plate is hinged to pan and fits vertical or slanting plenum.

• Although lower priced than previous Monmouth Humidifiers, this "310 Series" model operates on the long famous and time-tested Monmouth principles, has the same control unit, and is in every respect a true Monmouth quality product — just a smaller edition, that's all.



We also make the larger size Monmouth Flotrol units, as well as Micro-Feed, the low-cost drip feed model — also Monmouth Humidity Conditioners, gas-operated, for all radiator heating jobs. Full details on request.

THE CLEVELAND HUMIDIFIER CO.

7802 Wade Park Avenue

Cleveland 3, Ohio

MONMOUTH HUMIDIFIERS

Heating Wholesalers —

(From page 185)

industry. There now is a movement by the National Electrical Manufacturers' Association to standardize on 5/8 in. shaft diameters for the popular size fractional horsepower motors commonly used in residential heating equipment. Mr. Byrd could not offer much hope for standardization of blower wheel shafts because economic problems of each manufacturer contribute to the size selected.

Charles J. Pearson, and Erwin A. Eichenberger, F. Meyer Brothers Company, responded to numerous problems confronting wholesalers in stocking registers and fittings.

Steel Gray Markets

The hottest question of the forum was directed at Albert C. Roeth, Jr., Inland Steel Company, when he was asked how steel finds its way into the gray market. He acknowledged the difficulty in making a suitable reply and assured his listeners that if the steel industry knew the answer, diversion of precious sheets into illegitimate markets would be stopped immediately. However to satisfy the question, Mr. Roeth related involved circumstances under which diversions have been known to have been made.

The forum session adjourned in an atmosphere of

SAVE HOURS of TIME and LABOR with the VERSATILE, HEAVY-DUTY



**Saws and Files Metal,
Wood, All Materials . . .
Quickly . . . In Hard-to-
Reach Places**

Here is one of the handiest, most valuable power tools now used by thousands of electricians, plumbers, maintenance men, sheet metal workers and many other tradesmen.

The Mid-States Saw Gun can be powered by an electric drill, air drill or flexible shaft to cut or file practically any material! It is lightweight, easy to handle (has detachable finger-grip handle) and versatile in performance. Use it for cutting cardboard or a 3/4" steel beam—Ideal for cutting openings in walls or floors and for cutting pipes and metal—Has 1001 uses.

You'll use the Saw Gun on every job—direct time and labor savings will pay for purchase price in only a few days.

**PRICE
\$42.50**

Territories open for Representatives and Jobbers.

MID-STATES WELDER MFG. CO.
6025 SO. ASHLAND AVE., CHICAGO 36, ILLINOIS

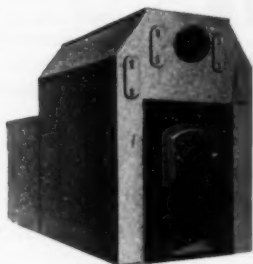
**NATIONAL
CHAMPION**

OIL, GAS AND STOKER FIRED HEAVY DUTY STEEL HEATERS

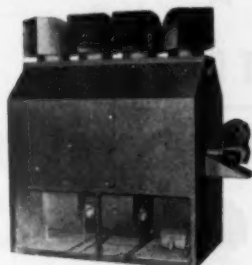
AVAILABLE
WITH OR WITHOUT
INDUCED DRAFT BLOWERS



MODEL D
200,000 TO 1,500,000 BTU



900 SERIES
400,000 TO 2,000,000 BTU



MODEL H
200,000 TO 1,500,000 BTU

Ideal for:

AUDITORIUMS	CHURCHES
DRIERS	FACTORIES
GARAGES	HANGARS
OFFICES	SCHOOLS
THEATERS	WAREHOUSES

NATIONAL HEATER COMPANY
2180 CLEORA AVE. ST. PAUL 4, MINNESOTA

WHY you can guarantee 15% to 50% GREATER TRIFICIENCY* WITH Wilson HAIR Filters

(*Based upon comparative results—ASHVE standards.)

- *1. **Greater dust-catching efficiency:** Hair, which Nature, in its infinite wisdom, placed in the nostrils of all humans, possesses an inherent ability to catch dust, dirt, lint and pollen. The surface of hair is barbed and fuzzy, with millions of tiny feelers extended to trap foreign particles.
- 2. **Maximum air-flow efficiency:** Hair is fine-textured, light in weight and airy. It permits a free-and-easy flow of air with minimum resistance. There are no layers. A Wilson *hair* filter pad requires no artificial channels for air passage.
- 3. **Maximum dust-holding efficiency:** In a Wilson *hair* filter pad, the hair is crossed and crisscrossed, in and out, up and down, back and forth every which way. This arrangement invites all dust and dirt to come in, spread around, and be trapped throughout the entire filter interior. This provides *full-depth* dust trapping... cleaning without clogging.

The famous Edgeseal,
the original Hair Filter
with the patented self-
sealing edge.



The popular Honey-
comb, the dressed up
Hair Filter that is so easy
to handle.

Save delay. Save dollars. Save doubt. Send for FREE sample
with details and prices.

WILSON & CO., INC.

(Air Filter Division), 4100 South Ashland Ave., Chicago 9, Ill.

Wilson Hair Filters are another quality product of Wilson & Co., Inc., world-famous for meat products, sports equipment, pharmaceuticals, hair products, etc.



WILSON'S HAIR FILTER



★
STEP UP

PROFITS

with

MARSHALLTOWN



**ROTARY
THROATLESS
SHEARS**

★ cuts any
size — shape

An ideal profit maker, this shear saves time, work on every job. It does irregular cutting or straight splitting at a rate up to 6 feet per minute.

Available in hand operated or motorized models. Prompt shipment.

• SEND TODAY FOR ILLUSTRATED BULLETIN

MARSHALLTOWN MFG. CO.

930 E. Nevada Street

Marshalltown, Iowa

satisfaction arising from constructive comments which each member of the panel contributed during the afternoon.

The panel also included:

D. R. Quinn, American Radiator and Standard Sanitary Corporation; Peter Pfriem, Clayton and Lambert Manufacturing Company; Grant Wilson, Grant Wilson, Inc.; Edward A. Raithel, White-Rodgers Electric Company; W. H. Rigby, Herrick Company; William H. Hehnke, Grand Island Furnace and Supply Company; Leo J. O'Connor, O'Connor Steel Company; Louis F. Demmler, Demmler Brothers Company, and Charles W. Vaughn, Wisconsin Furnace Company.

1951 Officers

President A. M. Vorys, Columbus, Ohio.
Vice President Fred R. Green, Des Moines, Iowa.
Treasurer..... John Robertson, Alliance, Ohio.
Secretary W. H. Bowe, Jr., Boston, Mass.

Kruckman—

Washington Letter

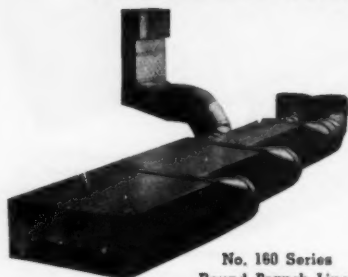
(From page 116)

\$11,830,000, and in 1950 copper and lead worth \$13 million. It is understood that a considerable part of the credit has been transformed into food stuffs for the hard-pressed Yugoslavs.

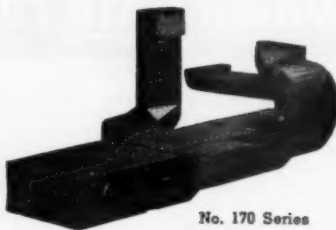
It is planned the stockpile shall be increased by

GRAY "Snap-Rite"

**FURNACE PIPE AND FITTINGS
AIR CONDITIONING PIPE AND FITTINGS**



No. 160 Series
Round Branch Lines



No. 170 Series
All Square Lines

A complete line of Gravity and Forced Air Pipe and Fittings with our positive "SNAP-RITE" Lock for quick assembly and erection. Wall Stack and Fittings in 3 1/4" standard depths. Truck Pipe and Fittings in 8" standard depths.

Write for Catalog

GRAY METAL PRODUCTS, INC.

30 Carlton Street

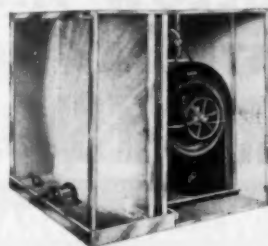
Rochester 7, New York

Available Now!

VALUABLE SALES OPPORTUNITIES

There are many choice sales opportunities available for qualified dealers who have the vision and imagination to see the huge profit line with ALTON — AIR WASHER — EVAPORATIVE COOLERS

ALTON installations have proven themselves all over the country and the increasing demand for ALTON gives YOU an opportunity to offer quality — at prices that sell.



For Installation In...

Churches
Bowling Alleys

Cafes
Bakeries

Factories
Super Markets

Mortuaries
Theaters

Retail Stores
Night Clubs

Taverns
Beauty Shops



If you will fill in the coupon below, we shall be glad to lay the facts before you and explain how YOU can sweep in the early profits that to-day lie waiting in every city, village, town and hamlet in the country.



Please send complete information
about the new Alton.

Name _____
Address _____
City _____ State _____

Manufacturers' Agents

Are you interested in securing additional lines?

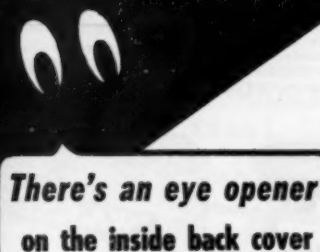
We are occasionally asked by our manufacturer advertisers to suggest the names of manufacturers' agents in various sections of the country whom they can contact in regard to representation of their warm air heating, residential air conditioning and sheet metal products.

If you would like your name listed on our records for inquiries we may receive on your territory, we invite you to write us. There is no charge in connection with this service.

American Artisan

6 N. Michigan Ave.

Chicago 2, Ill.



**There's an eye opener
on the inside back cover**

ORIGINAL REPAIR PARTS
for
**AMERICAN AND
RUDY FURNACES**

also

Repairs for other makes such as: PENINSULAR, JEWEL, LAUREL, GARLAND, MARSHALL, HOME, HOLLAND, KALAMAZOO, CALORIC, ETC.

Phone 5322 — Write — Wire

LIVINGSTON, INC., MARSHALL ICHIGAN

Your warm air heating supply house

FOLLOW THE PATHWAY TO PROFITS *with*

WALSH REFRACTORIES FOR THE DOMESTIC HEATING INDUSTRY



COMBUSTION CHAMBERS

Walsh-Made PeTeCo
Precast Interlocking
Combustion Chambers
assure complete burning
of oil... full efficiency.

Greater profits on each installation... bigger fuel savings for your customers... are the extras you get in Walsh products for the domestic heating industry. On every count... from unexcelled manufacturing facilities to long experience, careful selection of raw materials and modern production methods, Walsh-made products assure you and your customers of unvarying high quality and dependability.



BAFFLES

Tripod type precast baffles with burnt refractory legs. Saves fuel. Reduces stack temperatures.



WALSH H & B CASTABLE

Money, time and labor saving "mix-and-pour" refractory. In 50 lb. and 100 lb. moisture-proof bags.

WALSH PRODUCTS INCLUDE:

Fire Brick • Furnace Liners • Burnt Combustion Chamber Tile
Plastic Furnace Lining • Castables • Airsetting Cements
Asbestos Furnace Cement • Insulating Fire Brick and Cement
Insulating Cement Fill

WALSH REFRACTORIES CORPORATION

101 Ferry Street • St. Louis 7, Missouri

FACTORIES: ST. LOUIS, MO. AND VANDALIA, MO.

WALSH
REFRACTORIES CORPORATION
ST. LOUIS, MISSOURI, U.S.A.

FOR OVER 50 YEARS
MANUFACTURERS
OF HIGH GRADE
REFRACTORIES

1,500,000,000 pounds additional primary aluminum during the next 5 years. The plan involves that we shall receive a new supply of 200 million pounds by the middle of 1951, another 100 million pounds by the end of 1951 and that during the following four years we shall be supplied 300 million pounds annually. The procurement has been arranged by the General Service Administration which acts as the purchasing agent in dealing with the Aluminum Company of America, the Reynolds Company, and the Kaiser Company, the three principals in the American producing market. There are other smaller concerns which also are expected to contribute. There was a plan to secure a total of 440 million pounds, half the annual output of the country, from Canada during the next three years. But on the plea that the Canadians couldn't produce an appreciable quantity during the first year, no contract was made.

Aluminum Plants Reactivated

Instead, the idle facilities of the Aluminum Company of America at Massena, New York and at Badin, North Carolina are to be reactivated. At top speed together they can produce 158 million pounds a year. It is expected it will take six months for them to get under way. The first year they are expected to produce 110 million pounds for the stockpile. The following four years they are scheduled to supply 158 million pounds annually. This leaves 190 million pounds which must be secured

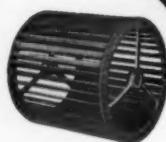
MASSACHUSETTS BLOWERS

Air Conditioning Furnace Blower Assembly. Designed for manufacturers of warm air furnaces and Air Conditioning equipment.
Wheel Sizes 7½" to 27"



Housing Sides—Cutoff Plate and scroll Sheet.

Heavy gauge steel stampings.



End Spider suspension type wheel assembly.

Write for catalogs.

MANUFACTURERS OF CENTRIFUGAL BLOWERS
FOR 35 YEARS

MASSACHUSETTS BLOWER DIVISION

The BISHOP & BABCOCK Mfg. Co.
4701 HAMILTON AVENUE CLEVELAND 14, OHIO



International
SAINT LOUIS
RADIANT PERIMETER HEATING

The most wonderful heat we ever used... saves 30% on our heating budget!

says William Schuster
Wilrad Corp., Erie, Pa.

International
SAINT LOUIS
Original Developers of
Radiant Perimeter Heating...
Manufacturers of Oil and
Gas Burning Furnaces

- All the advantages of radiant heat plus greater uniformity, instantaneous response to thermostat control plus filtered and conditioned air circulation throughout your homes.
- Requires less than four square feet of floor space.
- Saves up to 30% and more on your heating budget.

Amazing new method of heating homes tested and approved by the National Warm Heating and Air Conditioning Association in conjunction with the University of Illinois, as well as in thousands of homes. Provides heat at floors with a blanket of warmth at outside walls. Builders all over the country are adopting this revolutionary new way of heating their homes at lower cost—and better than ever before.

READ WHAT THESE AUTHORITATIVE PUBLICATIONS HAVE TO SAY ABOUT THE NEW HEATING SYSTEM WITH INTERNATIONAL FURNACES...

HOUSE & GARDEN: "combines advantages of a radiant floor panel and a warm air system... envelopes outside windows and walls in warmth."

PRACTICAL BUILDER: "especially well adapted for basementless houses... economical... very compact furnace."

AMERICAN BUILDER: "answers need for low-cost heating method... blower is cradled in resilient springs, permitting operation without hum or vibration."

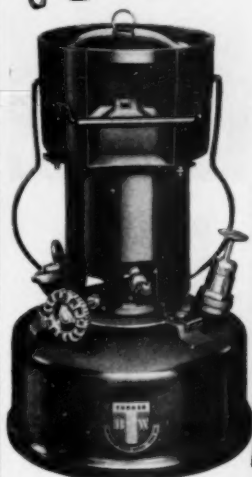
ARCHITECTURAL FORUM: "sets a stiff pace in the economy house field."

LIVING: "This system has many advantages... outlets under windows... low initial and installation costs... warms quickly."

SEE THE COMPLETE LINE OF
INTERNATIONAL FURNACES—
SPACES 54 AND 55—AT THE
NABO SHOW, STEVENS HOTEL,
CHICAGO, JAN. 21-25.

Send for details on how you can heat your homes better at lower cost. Enclose your plans and we will send estimate and cost of installation.

International
SAINT LOUIS
OIL BURNER CO.
3820 Park Ave., St. Louis 10, Mo.



TURNER

(NO. 475)

Low Pressure

**TINNER'S
FIRE POT**

**SMOKELESS
★
SPARKLESS
★
SOOTLESS**

- ★ Ready for operation in 5 minutes.
- ★ Fuel capacity one gallon; burns for 9 hours on one filling.
- ★ Safer... reduces fire hazard of old-style charcoal burners.
- ★ Soldering iron rest keeps points of soldering coppers out of direct flame... saves re-tinning.
- ★ Complete with Turner's exclusive "Carburetor Control"... providing solid blue flame with more perfect combustion; also a flame control—for exact heat desired—which automatically cleans the orifice, thereby eliminating need for separate cleaner wire.
- ★ Construction assembly permits quick, easy accessibility and cleaning... windshield, top-plate, and bail handle are one unit, and can be lifted from tank in five seconds by loosening one wing nut.
- ★ Burner coil made of extra-heavy seamless steel tubing... protected by sturdy outer jacket that maintains heat without overheating... can be generated and used in heavy wind. The combination may also be used for melting purposes.

See Your Jobber!

THE TURNER BRASS WORKS



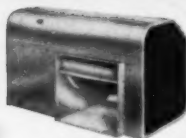
THIS YEAR AND EVERY YEAR...

REX THE LINE THAT'S FINE ALL THE TIME



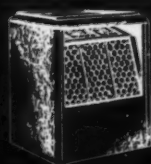
BLOWERS

Over a dozen models for standard applications. Able to make special units to meet manufacturers specifications.



ALL-PURPOSE BLOWER

Portable. Low price. Washable filters. Quick installation. No grouting or cold air returns. Summer-winter operation.



BLOWER-FILTER UNITS

Nine models. 700 to 6500 C.F.M. For all gravity warm air furnaces. Latest engineering developments.



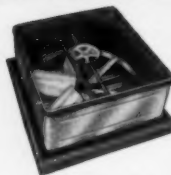
PORTABLE FANS

Three models for circulating and ventilating purposes. Used in windows, on walls or floors.



WINDOW FAN

Reversible ventilating fan for 4 to 6 rooms. Large capacity. Fits most windows. Easy to install.



ATTIC FANS

Four models horizontal mounted, vertical discharge type. Large capacities. With ceiling shutters.



VARIABLE-USE FAN

Ten models with unlimited application for domestic, commercial and industrial use.



DIV. CLEVELAND HEATER CO.
2310, SUPERIOR AVENUE
CLEVELAND 14, OHIO

WRITE TODAY

Catalog or Specifications. If you're a manufacturer with Blower problems call us in.

SOLD THROUGH DEALERS AND JOBBERS ONLY

from other sources in 1951, and 142 million pounds which must be secured each of the four years thereafter. It is calculated the 35 per cent cutback which the NPA has imposed upon the civilian economy will help to make up some of this deficit. Moreover, other cutbacks are expected. It is anticipated there will ultimately be at least 50 per cent in cutbacks upon the users of aluminum for civilian purposes.

They tell us here the reason for delay in developing the primary aluminum supply is the processing from the time bauxite is taken from the ground until it is delivered in alumina ingots to the primary users. The establishment of plants costs a great deal of money, and the operation of a plant which turns bauxite into alumina requires a great deal of electrical power. It is said it is possible chiefly where the producer can secure power from government plants at a price of 2 or 4 tenths of a cent per kwh. The private companies have considerable reserves of power, estimated at between 12 and 15 per cent of what is used today. But their price for power is more than double that charged by government plants. It is obvious, under the circumstances, that the huge potentials of power in such projects like Passamaquoddy are made for the purpose. Moreover, the same sort of power is needed to process lowgrade manganese, which is required for the expanded production of steel. This condition unquestionably predicates that several new large power projects will come into existence during the period of controlled economy which is now upon us.

BUILT For BETTER CLEANING

the GRAND RAPIDS deluxe FURNACE CLEANER

Model of the Doyle Vac-It



Built by men who understand the problems of furnace cleaning, the Grand Rapids Furnace Cleaner has been developed into a highly serviceable unit meeting all the requirements for faster, easier and more profitable cleaning:

DURABLE—COMPACT CONSTRUCTION • LIGHTWEIGHT ALUMINUM HEAD ASSEMBLY • HIGH POWERED MOTOR • 9" DIAMETER ROTARY FAN • LARGE CAPACITY HEAVY DUTY STEEL TANK • FLEXIBLE RUBBER CLEANING HOSE WITH 2" INSIDE DIAMETER • EFFICIENT OUTSIDE FILTER BAG • FREE ROLLING SWIVEL-TYPE CASTER WHEELS • ENGINEERED FURNACE CLEANING ATTACHMENTS.

Write today for complete information

Doyle VACUUM CLEANER CO.

227 STEVENS ST., S.W.

GRAND RAPIDS 7, MICH.

How a shortage can make money for you

Shortages are increasing in every line of business. But there is one shortage that can mean more profit dollars in your pocket!

The short time it takes to complete installation of a warm air heating system when using Youngstown Fittings is a shortage beneficial to you. We know you will save time and labor charges with these fittings. We planned them to make these savings possible. Time saved on each job means the same crew can finish more installations, increase volume, a vital factor under present-day conditions. Your jobber can supply you with Youngstown's modern, high profit fittings. For technical assistance or information write directly to us. We will be glad to help.

YOUNGSTOWN FURNACE CO.

627 Marshall Street

Youngstown, Ohio

NOW AVAILABLE **by reader request**

A complete reprint booklet of the series of articles published in the August, September, October, and November issue of American Artisan—

Heating Basementless Houses with Warm Air
by S. Konzo, W. R. Hedrick, and J. M. David

A manual for designing and installing perimeter warm air heating systems—a method which features a combination of radiant and convection heating.

Step by step, each important consideration in the application of warm air heating in basementless houses is fully described in detail by heating men in a manner that can readily be followed and applied by the warm air heating industry.

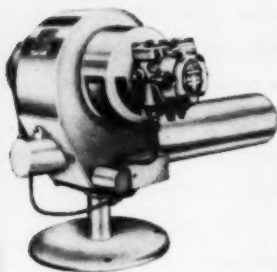
Price — \$1 Per Copy

AMERICAN ARTISAN

6 No. Michigan Ave.

Chicago 2, Ill.

Get Ready for 1951 with the Big Profit Line of Better Oil Burners



It pays to sell the Sun-Ray because it's a quality line, built by one of the leading and oldest burner manufacturers. Sun-Ray burners are endorsed and specified by architects, engineers, builders, realty managers, federal, state and city departments everywhere. Thousands upon thousands of these burners are installed every year in homes, apartment houses, stores, factories, schools, churches, institutions, etc.

It pays to sell Sun-Ray because Sun-Ray sales literature, newspaper ads, window displays and signs make Sun-Ray known to your customers as an outstanding name for economical heating. Sun-Ray factory engineering and sales co-operation are outstanding.

For quicker service—Sun-Ray Burners are factory stocked in Buffalo, Chicago, St. Louis, Detroit and Portland, Ore. They are also warehoused by leading distributors throughout the country.

Investigate the Sun-Ray line from every angle—design, specifications, installation, service, performance, price. You'll discover—as have many others—that it pays off handsomely to enjoy a Sun-Ray sales franchise.

Inquiries invited from furnace and boiler manufacturers.



Famous the World Over
for Quality and Economy

SUN-RAY BURNER MFG. CORP.

139-34 Queens Boulevard

Jamaica 2, N. Y.

Models from
0.7 to 25 g.p.h.



We also are receiving help with our aluminum stockpile from Jamaica and the British West Indies. Jamaica, like the Dutch West Indies, has the richest bauxite mines in the world. We have signed a contract with the Reynolds-Jamaica Mines, Ltd., by the terms of which we will advance to them \$5,963,000 in Marshall Plan funds, and 1,800,000 pounds sterling, which is about \$5 million, for the development of the bauxite mines on the Island of Jamaica. The funds advanced through the ECA will be repaid by the mining company over a period of 20 years in the form of aluminum which will be constantly added to our stockpile. The company has already spent \$1 million in exploring the possibilities of obtaining the bauxite, and will spend another \$1 million of its own funds on the project. It is also more than likely that the amazing bauxite deposits in Dutch Guiana will immediately be further explored. An appropriate organization will be formed to bring the mineral to the United States for conversion. Most of these things will take place when the necessary arrangements are made to manufacture the alumina.

The Federal Supply Service, which is in operational charge of the stockpiling business has a staff of inspectors, both in Washington and in its ten field offices. It often has its men at the ports of entry to check on important materials, and at manufacturers facilities. In some cases, it has conducted inspections in such foreign countries as Surinam, Dutch Guiana; Madagascar, French Africa; and in Rhodesia, in South Africa.



...keeps Western Rotary Turbine Ventilators in operation, providing constant 'round-the-clock' exhaust. Western's lifetime-guaranteed bearings are both mounted on the same axis...always stay in alignment...stand up to shipping jolts. Throat sizes from 6" through 48". The typical, clean, attractive silhouette that progressive industry demands. Western turbo-ventilation...high in efficiency, low in cost.

Request our catalogue for information, sizes, capacities, price lists. In 1951 Sweets and A. E. C. Jobbers are invited to participate in our national sales system.

"Always on the job—never on the payroll"

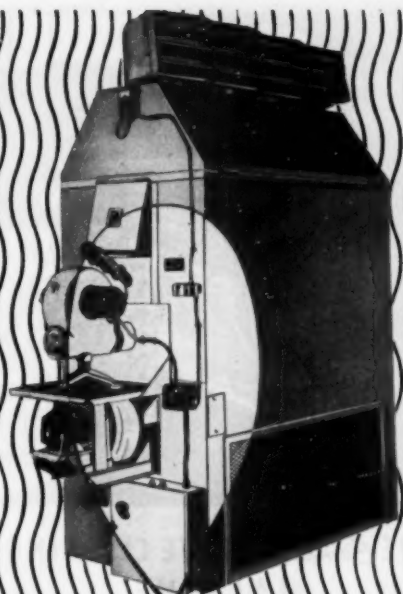
WESTERN ENGINEERING & MFG. CO.

1726-28 WASHINGTON BLVD. LOS ANGELES 21, CALIF.

There isn't an awful lot of difference between Grant Wilson furnace cement and other good brands . . . just enough so that it goes on real easy, stays put and stays tight. The time to remember the name, "Grant Wilson" is when you're ordering; after the stuff is installed, you can forget all about it.

Send a postcard for a free sample and see for yourself.

Grant Wilson, Inc.,
Board of Trade Building,
Chicago 4, Illinois

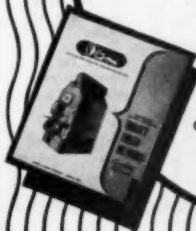


Construction

. . . . The Olson heater has a rigid base, free from vibration, low fan speed, oversize drive, heavy shaft, large self-aligning ball bearings, heavy outside casing with radiation shield and ample relief and access doors.

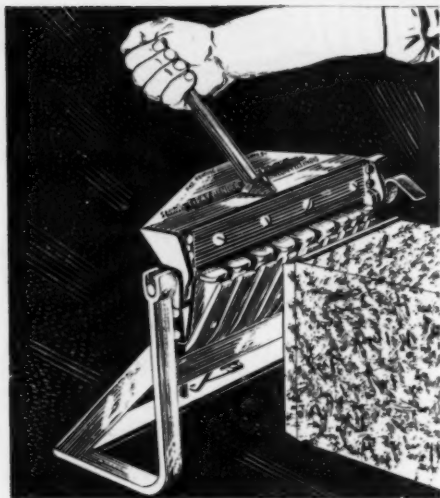
Olson

ARTHUR A. OLSON & COMPANY
Broad Street, Canfield, Ohio



DIRECT FIRED HEATERS
Gas, Oil, Coal
or Dual Gas and Oil

Get the inside story
Write for catalog
No. F50



THE *Complete* DRIVE CLEATING MACHINE

Smith's Cleat Benders save wasted minutes that add up to hours . . . days . . . and weeks of needless effort. Works like a bar-folder in that a bend can be made and pinched down. Unlike a bar-folder or any other bender, it is so constructed to allow entering square ducts of various widths to make the bend.

Cutaway showing duct resting on fingers pressed against stop plate.

FEATURES

- ✓ Fingers mathematically spaced unlike bar-folder or any other bender.
- ✓ Stop plate like bar-folder.
- ✓ Bending plate like bar-folder.
- ✓ Pinching down plate unlike bar-folder does not flatten heel of bend. No screw-driver needed to make connections.

EDGE CLEAT
DRIVE CLEAT

Uniform cleat edges and perfect drive cleats free of ripples.

Write for information and prices.

R. E. SMITH

1513 MONROE STREET, WAUKEGAN, ILLINOIS

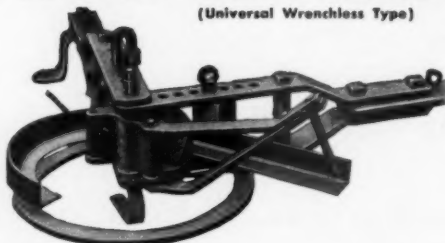
The actual stockpiles are located at 144 places, including one in Alaska. They include 68 military depots, 6 depots operated by the Federal Supply Service, and 7 other government-owned storage sites, four vault locations under the jurisdiction of the Treasury Department, and 59 commercial warehouses, tanks and leased sites. Sixty-eight of the commercial warehouses are used to store rubber. Other commercial storage space warehouses store oils until further government facilities are available. There are three tank farms for the storage of oils. Stockpile storage requirements are classified as warehouse, open, dry tank, fluid tank and vault. Generally, warehouse storage is used for baled materials, such as rubber and cordage fibres, and packaged materials, such as mica, quartz, and high-cost metals in barrels. Open storage is used for ores and primary metals which are not adversely affected by exposure. Dry tank storage is used for bulk materials which cannot be exposed to the weather, such as asbestos, and for ores and metals of relatively high-dollar value, or fine-powdered materials which can blow away. Fluid tanks are used for the storage of oils. Vaults are used for narcotics, precious stones and metals, synthetic jewels and jewel bearings. Judged by present stockpile objectives, approximately 27 million sq ft of warehouse space, and some 39 million sq ft of open area will be required for the stockpile program.

Some of the materials, particularly ores, are used at

FAST ACCURATE BENDING WITH

HOSSFELD IRON BENDER

(Universal Wrenchless Type)



BENDS FLAT, ROUND, BAR, ANGLE IRON AND PIPE

Simple to set up, easy to operate, bends radiuses, angles, off-sets, etc. fast and accurately. This inexpensive, versatile bender is an indispensable tool in any shop doing bending.

NOW AVAILABLE . . . NEW HYDRAULIC ATTACHMENT

Especially suited for production jobs and bending radiant heating coils.

Write for complete details to

HOSSFELD MFG. CO.

Dept. A WINONA, MINNESOTA



PEXTO . . . Best Buy



No. 0585—20 gauge

in CRIMPERS AND BEADERS

*For combination crimping and beading
—crimping only or beading only—single
or ogee.*

*Available in three sizes:
24 ga. - 20 ga. - 18 ga.*

THE PECK, STOW & WILCOX CO.

—SINCE 1785—

Southington, Connecticut, U.S.A.

GET STYLE, EFFICIENCY AND TIME-TESTED QUALITY WITH the ROCK ISLAND line

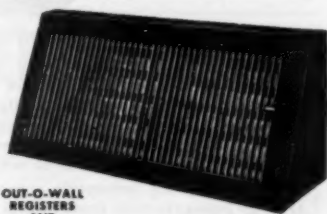
You can't give your customers anything but the best . . . and when it comes to registers, the best is Rock Island.

These time-tested registers may be installed with full assurance of top-flight performance throughout the life of the installation. They're perfectly designed, too, to harmonize with the most modern of decoration schemes . . . as well as to enable you to meet competition on the jobs where price is a factor.

We've been making registers for a long time . . . we know what you need and you can be sure that any installation completed with Rock Island Registers will be a credit to you and a source of extreme pleasure to your customers.

We'll send you more complete information on the whole Rock Island line upon receipt of your request.

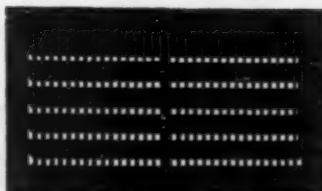
ROCK ISLAND REGISTER CO.
2435 FIFTH AVENUE ROCK ISLAND, ILLINOIS



OUT-OF-WALL
REGISTERS
AND
INTAKES



FLOOR REGISTERS



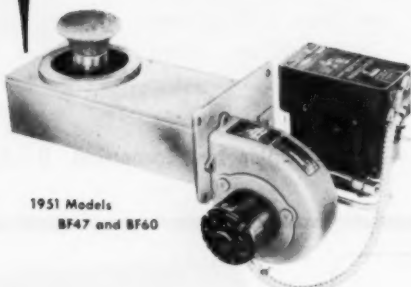
FORCED AIR REGISTERS DESIGNED FOR SIDE-
WALL AND BASEBOARD INSTALLATIONS

**MORE FURNACE
MANUFACTURERS
THAN EVER BEFORE
WILL CHOOSE**



**The New 1951
Ball Flame
OIL BURNER**

Reg. U.S. Patent Office



1951 Models
BF47 and BF60

In 1951 manufacturers will again show their overwhelming confidence in the quality and performance of "Ball Flame" Burners by making them a vital part of the furnaces they will ship to small homes projects and to builders of hundreds of individual homes.

This completely automatic, pressurized air, gravity type oil burner is now standard for leading makes of small furnaces, installed in many flourishing home developments.

Builders and heating contractors in large numbers are writing the "Ball Flame" into their furnace specifications.

Here's Why

- ✓ It's absolutely quiet—no motor hum, no flame roar.
- ✓ It burns less than 0.75 gallon per hour without clogging, flame deflection and burning out of fire boxes, as with small capacity pressure burners.
- ✓ It vaporizes and burns the oil perfectly — no starving the center of burner flame and poor combustion.
- ✓ An automatic levelling device is built into each burner.

KRESNO-STAMM MFG. CO. (America) Inc.

PALISADES PARK, N. J.

Canadian Affiliate: Kresno-Stamm Mfg. Co. (Canada) Ltd.
1452 Drummond Street • Montreal, P. Q.

only a small number of consuming plants, and the possibility of storing such materials at, or adjacent to plants has been carefully investigated. Industry evidenced considerable interest in this proposal. Arrangements were completed and property leased for a stockpile of manganese ore adjacent to a major consuming plant during the period, and material is being shipped to this site. It is expected that additional stockpiles at consuming points will be established during 1951.

During the past six months fire security criteria for the storage of rubber and oils were issued and final action is pending on criteria for the storage of cordage fibres. A special section for the Stockpile Storage Manual on general fire protection requirements was developed. Copies of the manual will be available to those who are interested. Criteria for less hazardous commodities will be issued in the order of their importance, probably grouped by general hazard category. A considerable number of fire protection inspections were made, and general fire security measures were strengthened at a number of locations.

The heaviest rotation in perishable commodities in the stockpile has been in connection with rubber. Large quantities of surplus rubber have been sold and replaced with higher grade rubber which will not deteriorate so rapidly as low-grade and soft rubber. After all poor quality rubber has been rotated, rubber in the stockpile is inspected periodically, and is rotated in specific lots. Rotation of cordage fibres has been in progress, with a

THE CINCINNATI ELBOW COMPANY

2021 Eastern Ave.

CINCINNATI 2, OHIO



**ALL SIZES
ALL ANGLES
ALL GAUGES
ALL METALS**

See Your Jobber



**CONDUCTOR PIPE
ELBOWS and SHOES**

NEED REPAIR PARTS

Try

IN A HURRY?

NORTHWESTERN

All makes of Stove
Furnace and Boiler
Repair Parts

Northwestern

STOVE REPAIR CO.

662 West Roosevelt Road

Chicago 7, Illinois

CHAMPION 'STANDARDIZED' FITTINGS

Save you time and money!

Champion offers you a proven way to build profit! These standardized machine-made fittings are guaranteed to fit perfectly. That means less shop time . . . less installation time — more time for you to profitably sell and install heating equipment. Try Champion on your next job.



Write for new
catalog showing
complete line.

CHAMPION
FURNACE PIPE CO. • 211 EATON ST. • PEORIA, ILL.



GO-EZE

(Formerly Goese)

**THE ORIGINAL TIME SAVER
DAMPER CONTROL**



(Patented)

Try the new package. For the convenience of the sheet metal trade 3 gross in carton bulk all packed separately—also packaged.

Write us for new prices to the wholesale and dealer trade.

SEVERSON MANUFACTURING & SUPPLY CO.

1034 W. Somer St.

Milwaukee 5, Wis.

rotation of older lots of fibre recommended for rotation based on material condition inspections. The diversity of commodity stockpiled involves a complex system of records, completely fascinating in themselves.

Roberts—

(From page 106)

the estimated life-span, the depreciation rate charged off annually, the unrecovered cost, which is the original cost less the charge-offs to date, and any other information that seems relevant.

- 8 Do not include income tax when appraising business operations. Review tax expense separately at the end of the year to determine where savings may have been effected and use this information as a guide in supervising tax expense more economically during the year to come. Tax rates increase or decrease arbitrarily, hence, these changes are beyond the control of the businessman. He can effect legitimate savings on tax by taking advantage of all allowable deductions and handling transactions in such a way throughout the year that he gets all the tax benefits coming to him.

When you have reviewed your business figures for the current year, when you have gone behind these figures to determine why certain items on the profit and loss statement or balance sheet were high or low, then you are in a position to preview operations for the year to come.

Galvan says, "Thank You!"

because you made possible

Our Nice NEW Plant

*It's the result of your
outstanding preference for*

Galvan "Better" Products



ALL metals, ALL sizes
ALL types of
CONDUCTOR ELBOWS



ALL metals, ALL sizes
ALL types of
TEE-TOP FUNNELS



GENUINE CRAFT'S
CUTOFFS in ALL
sleeve, and ALL metals

FREE

a money returned mailed
copy of the Galvan
drive booklets and name
of nearest jobber.

GALVAN

Manufacturing

CO.

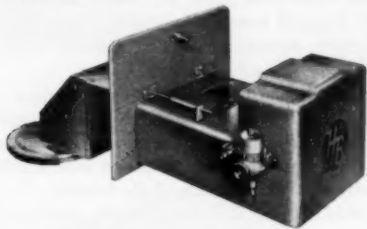
New Albany, Ind.

NEW PRODUCTS

Handley-Brown Offers

Two New Products

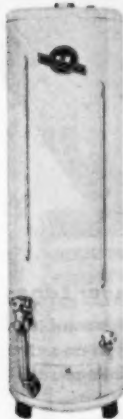
NOW INCLUDED in production with the new model Fuel Door Conversion Burner, recently announced by Handley-Brown Heater Company, Jackson, Michigan, is a unit designed and built for use with LP Gas.



Handley-Brown's New Model #3FD-10-1-L
Fuel Door Conversion Burner for LP Gas

DESIGNED TO GIVE maximum efficiency at all inputs, the Handley-Brown line of Fuel Door Burners has a wide range of inputs—60,000 to 180,000 B.T.U.'s for natural gas models; 60,000 to 150,000 B.T.U.'s for LP Gas. Without using flame spreaders, the Handley-Brown "Inferno" burner head speeds the heat directly to the heating surfaces. Fits over oil or stoker installations without removing or changing them. Equipped with thermocouple-type pilot. Easy to service, as all parts are quickly reached, or entire burner can be removed in less than ten minutes. Fits furnaces, boilers. Handley-Brown also manufacture a line of Ash Pit Conversion Burners for Natural and Manufactured Gases. Completely automatic. Write for details.

NEW WATER HEATER



PRODUCTION of a whole new line of fast-recovery water heaters was also announced by the Handley-Brown firm. Built in 20-, 30- and 40-gallon models, the new Handley-Brown Speedmaster water heaters are furnished in two series—the Imperial Speedmasters (the deluxe models) and the Standard Speedmasters (the low-priced line). Imperial models are equipped with NAX High-Tensile Steel Tanks for life-time service. Equipped with new Uniflame "life time" burner. Write for information.

Handley-Brown smashing all previous records with dealers all over the country on their exclusive Table Top, flush-to-the-wall, inverted model and their "U" Tube heaters."

Firm Invites Inquiries

HANDLEY-BROWN invites inquiries on its products and offers exclusive representation in certain territories to aggressive distributors and jobbers.

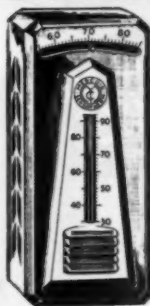
Handley-Brown Heater Company
Gas Division, Jackson, Mich.

LAY OUT YOUR PLANS WITH MERCOID CONTROLS

They fit into the scheme of giving your trade the maximum value and service for their money.

Your cost is practically no higher—and what is more, there will be no infringement on your profits through unnecessary service calls.

Mercoïd is your best assurance of all around control satisfaction. This statement is backed up by experience in thousands of installations.



MERCOÏD SENSATHERMS

To keep the home at an even room temperature



LIMIT CONTROL

To protect that furnace from overheating



SAFETY CONTROL

To assure safe oil burner performance

Write for Mercoïd Catalog No. 700

THE MERCOÏD CORPORATION
4201 Belmont Avenue Chicago, Illinois

*The only 100% Mercury Switch equipped controls
They assure better control performance and longer control life*



THIS LIGHT WEIGHT, easy - to - handle insulating material reflects 95% of all radiant heat. Alfol Asbestos enables you to do a better insulating job in less space. Compared to conventional materials, ALFOL offers 88% greater efficiency with 75% less bulk, one-fourth the weight and at one-half the cost.

Alfol aluminum foil combined with flat or corrugated asbestos sheets will give performance equal to 1½ inches of plain air-cell board. This fact was proved by tests conducted by the famous Armour Research Foundation.

If you make heating or heated equipment, send for working samples of this light, inexpensive Alfol Asbestos. See for yourself how it helps cut costs and production time.

Alfol

FIRST IN REFLECTIVE INSULATION
REFLECTAL CORPORATION

155 East 44th St., New York 17, N. Y.

Milwaukee School —

(From page 127)

representatives in all three phases, plus consultants in the technical specialties involved. The review is to determine past accomplishments, not weaknesses, if any; and recommend changes in the light of the committee's findings.

One of the features of the course at MSOE is the concentric curriculum which has been followed ever since Oscar Werwath founded the school. With the concentric curriculum, terminal points are provided at progressive steps in the student's education.

These terminal points were set up for those who had to drop out either by desire, necessity or ability. In the system, no matter what the student's educational background, a terminal point is created with a definite job objective for a particular level of education.

Within the MSOE system, this is what can happen. A graduate from the six months' program in refrigeration service is trained to operate, install and maintain or repair both domestic and commercial refrigerating equipment. If he wants to enter business at this stage, he is equipped to become owner of a business, a refrigerating salesman or a field serviceman. Or if he remains at school, he can move into the refrigeration and heating course.

Similarly, a graduate from the refrigeration and heat-

OB DYKE

**IMPROVED
EAVES
TROUGH
FOR
BETTER JOBS**



No More Ragged, Sagging Inner Edges

Our hemmed and fluted inner edge combines great strength with safer handling at no extra cost to you. Try it and join the ranks of satisfied users.

BENJAMIN P. OBDYKE, INC.
443-453 N. 8TH. ST. PHILADELPHIA 23

Beverly Shears MEAN BETTER WORK



THROATLESS SHEAR

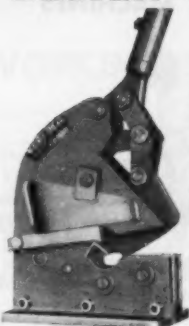
Make straight or intricate cuts in the lightest metals without distortion, yet handle heavier gauges with ease on a BEVERLY — the all-around Throatless Shear. Made in 4 models to handle 18 gauge to 3/16". Equipped with High Carbon, High Chrome Blades.

8-3 with
Ball Bearing
Hold Down



INSIDE SLOTTOR

8" reach, Inside Slotter, designed to make inside cutting and slotting faster and easier. Capacity up to and including 16 ga. mild. Cuts slot 2 1/2" long x 1/8" wide with one stroke. Unique arrangement of 5 H.C.H.C. blades assures fast, clean, accurate cutting.



CABLE CUTTER

Cuts wire rope up to 1 1/16" dia. quickly and cleanly at one stroke. Also handles heavy electrical cable, armored cable, steel reinforced rubber hose, etc., with ease. Snap-Action Hold Down assures faster operation. High Carbon, High Chrome blades assure long cutting life.



SLITTING SHEAR

All steel welded construction, plus extra built-in strength keeps the "SS-3" Slitting Shear cutting clean indefinitely. No springing of blades, no distortion after use. Slitting capacity 3/16" mild steel; trimming capacity 5/16"; bar capacity 1/4" x 2". Equipped with High Carbon, High Chrome Blades. Made in 3 sizes.

See your Dealer or Write direct for illustrated catalog sheets on Beverly equipment.

THE BEVERLY SHEAR MFG. CO.

3020 W. 111th Street

Chicago 43, Illinois

Elgo Ventilating Specialties

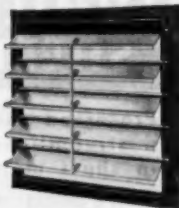
FAMOUS AUTOMATIC SHUTTER

Unusually sensitive to air currents, causing the louvers to open instantly when the fan is turned on — and snap shut when the fan is turned off.

The aluminum louvers are weatherstripped. The best fitting shutter on the market.

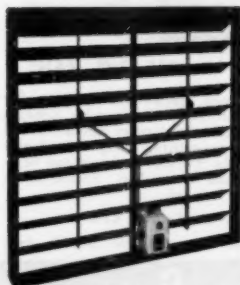
Louver blades have special felt silencing pads. Equipped with improved shoulder rivet.

Sizes from 8" to 72" square — also rectangular.



"ELGO" TYPE
AUTOMATIC SHUTTER
Front View (Open)

Elgo Shutters Are Distributed Through Fan and Air Conditioning Equipment Manufacturers



All-Steel Motorized Shutter

Used for exhaust ventilation in industrial, commercial and residential buildings. Automatically controlled by fan switch. Positive closing. Storm-proof. All-steel construction.

Elgo Shutter & Manufacturing Co.

2738 W. WARREN

DETROIT 8, MICH.

Elgo Shutter & Mfg. Co.

2738 W. Warren

Detroit 8,

Michigan



Please send catalog showing the items checked below:

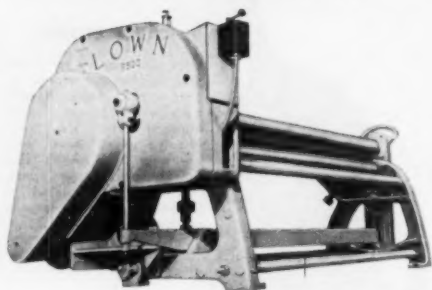
Automatic Shutters _____ Ceiling Dampers _____
Stationary Shutters _____ Motorized Ceiling Shutters _____
Hand Operated Shutters _____ Motorized Shutters _____

Name _____

Address _____

City _____ State _____

LOWN SLIP ROLL FORMING MACHINES



Model B-400 Series—6" diameter
A new improved, modern design, heavy duty machine engineered for durability, strength, and service.

- Initial Pinch Type-Power Driven.
- Rolls 6" diameter, all driven.
- Oilite Bearings, Alemite Lubrication.
- Roll Position Indicators.
- Available in lengths from 3 ft. to 12 ft.
- Silent Chain Drive.
- Built with Power Adjustment on rear roll and air cylinder attachment if desired.
- Fast sturdy and easy to operate.
- Prompt deliveries.
- Other size machines also available.

Dealers in Principal Cities

Write for Bulletin

San Angelo Foundry & Machine Company

SAN ANGELO, TEXAS

1000 EAST UPTON

LUSTRIK[®] ALUMILITED SHEETS

Processed metal for a streamlined effect in sheet metal work

- SIGNS & LETTERS
- FACIAS
- ENTRANCES
- SOFFITS
- DOOR FRAMES
- SPANDRELS
- DOOR COVERINGS
- BULKHEADS

Lustrik[®] Alumilited aluminum sheets have the stand-out features that appeal to every "sheet metal man." Here's a treated sheet that can be formed on a brake and cut with ease. Large panels save time — quickly and inexpensively erected. Ideal for the modern effect on stores, factories, service stations, etc. Available in flat, square streamlined, rib fluted, corrugated and cross crimped corrugated.

* Reg. T.M.

WRITE for free sample kit and information

PHILADELPHIA RUST PROOF CO.
3225 Frankford Ave., Phila. 34, Pa.

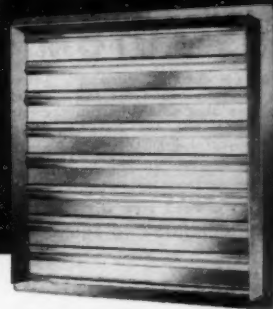
ing course is trained to operate, install and maintain heating as well as refrigeration equipment. Upon completion of this six months' course, he has two choices. He can enter industry — equipped to become an owner of a business, heating salesman or laboratory assistant — or he can enroll in the supplementary one year course in advanced heating, refrigeration and air conditioning.

A graduate from the RHAC course is trained as a technician, and he may help design heating and air conditioning systems and do layout work. Upon satisfactory completion of this course, most students enter industry. But those who desire can continue their education by studying an additional two calendar years in the college of electrical engineering. A proportionate number of credits may be transferred to the college so that a man may earn a Bachelor of Science degree in Electrical Engineering. Thus in four years a student can conceivably progress from the service level, through the technician level and on to the engineering level.

A good chance for part-time employment is offered in highly industrialized Milwaukee which has enough industry so that a student can work part-time in fields closely associated with his major study. Over 75 per cent of the enrollment is engaged in some work to defray a part of training expenses. This service comes under the direction of the Milwaukee School of Engineering's Student Service Program.

Faculty members at MSOE, 84 in all, include men

they all want **AIR-FLO**



MODEL
A-555

THE
AUTOMATIC
SHUTTER
WITH ALL THE
FEATURES

Front View—Closed

IT TAKES THE LOAD OFF THE FAN!

Aluminum louvers open fully, permitting capacity fan operation. New heavy reinforcement strip adds strength and long life to the louvers, assures quiet operation and perfect counterbalance, prevents rattling. Deep shroud protects shutter from high winds. Tie-rod, brackets and bearings inside frame, not exposed to weather. Special finish resists corrosion. Many other features.

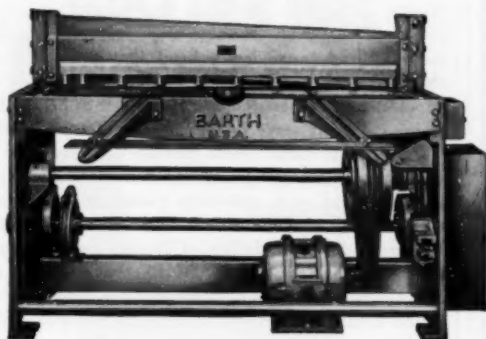
• Write for New Air-Flo Catalog 43-C

Illustrations and details of the complete Air-Flo line.

AIR CONDITIONING PRODUCTS CO.
2340 W. LAFAYETTE BLVD. • DETROIT 16, MICH.

BARTH

MODERN METAL WORKING EQUIPMENT



No. 1452

BARTH sheet metal working tools keep step with every major stride of the industry. When you install one you make a definite contribution to progress. You meet a modern need with a modern tool! Write for latest catalog.

PRODUCTS

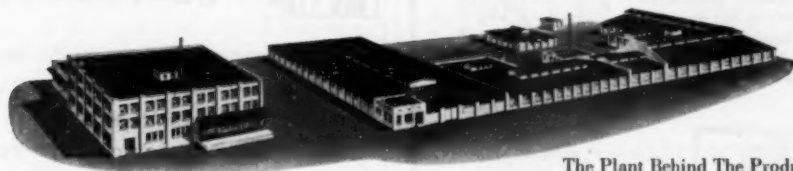
Power Squaring Shears
Foot Squaring Shears
Foot Gap Shears
Bar Folders
Forming Rolls
Slitting Shears
Bar & Rod Shears
Combination Deep Throat
Bench Machines
Wiring Machines
Edging Machines

Turning Machines
Burring Machines
Flanging Machines
Crimpers & Benders
Brace & Wire Benders
Bench Plates
Cast Iron & Steel Stakes
Rivet Sets
Hand Groovers
Hand Bending Brakes

THE BARTH MANUFACTURING CO., MILLDALE, CONN., U.S.A.



STORM KING FURNACE FITTINGS



The Plant Behind The Product

Look for the Storm King Label; it is your Guarantee of highest quality. The reliability and integrity of Ohio Valley Hardware & Roofing Company stand squarely behind each Storm King Furnace Fitting.

Metal Manufacturing Division of

OHIO VALLEY HARDWARE & ROOFING COMPANY

Evansville 2, Indiana

Compare the Value



Clipper

FORCED AIR GAS HEATING

The Henderson Clipper, Clipperette and new Hendy "60" offer a complete range in B.T.U. input, from 60,000 to 200,000. Each model challenges comparison in design, materials, construction, performance and price! Investigate before you specify.



PRECISION CONSTRUCTION—Custom standards of craftsmanship combined with modern assembly-line production. Even the panels are fitted to a tolerance of 1/64th inch!

HENDERSON BLOWERS—Our own design, produced complete in our own factory, painstakingly balanced for smooth, quiet operation! No others like them.



FACTORY TESTING—Every unit is completely assembled at the factory and tested in actual operation. Saves time, saves trouble on the job.

Write for "Compare the Value" booklet

HENDERSON
FURNACE AND MFG. CO. - SEBASTOPOL, CALIF.
CLIPPER • CLIPPERETTE • HENDY "60"

with practical and theoretical backgrounds, able to provide students with the instruction required. It is not the intent of the school to provide experience with every piece of equipment to be encountered in the student's field after he leaves school. Instead, MSOE seeks to provide sufficient background and practice in the solution of problems typical of refrigeration, heating and air conditioning and allied fields encompassed by it.

The RHAC faculty includes nine technical specialists, some with advanced degrees, and all with backgrounds that keep them in close touch with industry and the problems that beset students when they complete their training. Many serve in the capacity of consultants.

Professional contacts with professional groups are encouraged for MSOE faculty members. Membership is maintained in such nationally prominent professional organizations as the American Society of Refrigerating Engineers, American Society of Heating and Ventilating Engineers, Refrigeration Service Engineers Society, and the American Society of Electrical Engineers. Many of the faculty hold offices in these organizations. Most of the groups' conventions are attended by representatives of MSOE.

Because of the work done at MSOE, the technical institute has been elevated within the framework of ASEE. Top educators of the engineering profession realize that the technical institute is playing a major role in the future of the engineering profession. Through

Am-Pē-Co SINCE 1929

"Unipack"
Furnace Blower

"DOC (WITH THOUSANDS OF SATISFIED CUSTOMERS) SAYS:
Quiet as a CAT'S PURR"

FIRST furnace blower made commercially in the Middle West. . . **TWENTY** years of service in thousands of homes . . . continuing demand is **PROOF** of **PREFERENCE** for **QUIETER** operation.

It's the operation that counts in a blower. Rugged operation that's "Quiet as a Cat's Purr" and long life are assured when you install the **UNIPACK**.

AMERICAN MACHINE PRODUCTS CO.
MARSHALLTOWN, IOWA

BE SURE AND
See the Reinhard
"Air-Lock" Gas
Conversion Burner

AT THE INTERNATIONAL
 HEATING & VENTILATING
 EXPOSITION
 PHILADELPHIA, PA.



Manufactured
 Since 1932

BETTER BURNERS ARE
 MADE . . . REINHARD'S
 MAKE THEM

**The Only Gas Conversion Burner
 With The "Air-Lock" Principle**

The Reinhard "Air-Lock" principle means more heat per cubic foot of gas. It means 40% greater efficiency for your customers.

In an unbiased test of 38 makes of gas conversion burners, the Reinhard "Air-Lock" Gas Conversion Burner led the field.

For greater profits — For more satisfied customers — sell Reinhard Gas Conversion Burners.

Burners From 19,000 to 3,000,000 BTU capacity.

COME IN AND REGISTER
 FOR **FREE** GAS METER
 FLOW-TIME TABLE

JAN. 22nd to 26th BOOTH 445
 COMMERCIAL MUSEUM • PHILADELPHIA

The House of Reinhard

11 South 9th Street

Minneapolis, Minn.

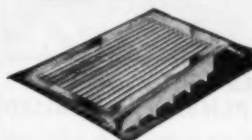


STANDFORATED

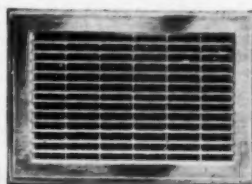
PERFORATION OF ALL METALS

"BEND-EZY."

**the *Finest* name in
 FLOOR
 REGISTERS**
 one-piece frame
 construction



finest-strongest



beveled edges
 fabricated metal
 more free air space
 solid construction
 no loose parts
 ultra-strong oak finish,
 baked on for
 longer wear—
 matches flooring.

COLD AIR FACES

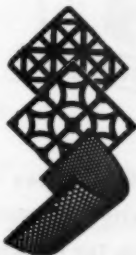
MADE IN ALL
 STANDARD SIZES

**No. 41-H "BEND-EZY" SIDEWALL
 REGISTER**



Has single damper; 3/16" turned down edge for flush installation. Pleasingly Styled and Efficiently Designed.

Sturdy construction, stamped from sheet metal. Incorporates horizontal bendable bars which are set at factory for 30 degrees downward deflection. At time of installation each bar can be easily adjusted with a "bend-ezy" tool to any desired angle for upward, downward or straight flow.



**PERFORATED
 METALS**

GRILLES
 SCREENS
 GUARDS
 FILTERS

Write for Complete Information and Prices

Standard Stamping & Perforating Co.
 3151 WEST 49TH PLACE • CHICAGO 32, ILLINOIS

H&C KWIK-WAY DAMPER



THE FINEST SETS . . . and MOST INEXPENSIVE, INSTALLED!

One hammer-blow is all that is necessary to solidly fasten the bearing to the damper. No anvil is required. Identical bearings with retractable bolt make easier installation of both regular and splitter dampers in round and square ducts. The time these sets save plus the fact they are complete—with handle—makes them by far the most economical of all sets when installed cost is considered. See your jobber or write us for literature.

LIST PRICES

FOR MEDIUM DAMPERS	FOR LARGE DAMPERS
No. 70 Set 30c	No. 80½ Set 60c
No. 77 Set 40c	No. 80½ Set 60c

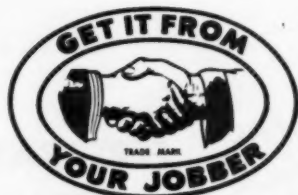
HART & COOLEY MANUFACTURING CO.

500 EIGHTH ST.

HOLLAND, MICH.

In Canada: Hart & Cooley Mfg. Co., Fort Erie, N. Ontario.

Midco Register Corp.
1059 Grand Ave.
St. Paul, Minn.



**Registers — Grilles — Floor Faces —
Floor Registers — Gravity Registers.**
The complete quality line for all winter and summer air conditioning.

President Karl O. Werwath, son of the founder, and president of the National Council of Technical Schools, the technical school has reached maturity, and provided the need for its type of education between the trade school and engineering level.

Recently established at MSOE is the Relations with Industry division, an outgrowth of the school's Industrial Relations department. Its function is to provide a free placement service for graduates. Close contact is maintained with industry to determine its needs, and to place graduates filling the requirement in job vacancies. In this way, a sizable percentage of MSOE graduates is placed before graduation. Also maintained is a careful followup system that enables the school to keep a watchful eye on the progress of its graduates.

Blower Packages —

(From page 134)

often the starting points for winter colds."

It might be well at this time to explain the operation to the prospect in simple terms.

"The gravity type of heating system, whether it is oil, gas, or coal is dependent on the fact that warm air rises and cold air falls. The warm air from your furnace rises through the pipes into a room until it reaches the ceiling. It remains there until it has been cooled and then it begins to fall toward the floor and back into the furnace through the return air system. This is a slow,



Remember — "Superior Elbows"
Really Fit and Adjust

★
SUPERIOR PRODUCTS CO.
MANUFACTURERS OF METAL PRODUCTS
DISTRIBUTORS OF HEATING SUPPLIES
606-10 South 14th St.
OMAHA 2, NEBRASKA

Announcement

We have appointed

The Famous Furnace Company of Lorain, Ohio
125 East 20th St., Lorain, Ohio

The Famous Furnace Company of Steubenville
146 North High St., Steubenville, Ohio

The Famous Furnace Company of Akron, Ohio
167 Hill Street, Akron, Ohio

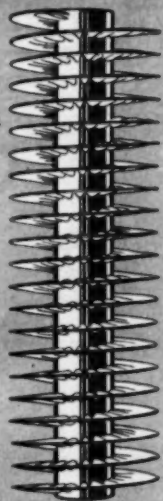
As our Sales Representatives
to better serve the needs of
our customers in this area.

The Famous Furnace Company
6420 Woodland Avenue,
Cleveland, Ohio



Throughout the
AIR CONDITIONING
Industry—

AEROFIN FIN-TYPE
HEAT-TRANSFER UNITS
do the job Better,
Faster, Cheaper



AEROFIN CORPORATION
410 South Geddes St., Syracuse 1, N. Y.

RINGS ALL TYPES

BAR, PIPE AND TUBE
STOCK
ACCURATELY ROLLED
ALL SIZES

Angles, tees, rounds, channels,
flats, pipe and tube — all rolled
in our plant to your exacting
requirements, both as to pro-
duction and delivery.

Leg out angle rings without
holes are carried in stock in
many sizes — furnished with or
without bolt or rivet holes.

Write for list of stock sizes and
discounts, also our circular de-
scribing our complete fabricating
services.

For further information write
us or phone Blslop 7-4255.

**NATIONAL
METAL FABRICATORS**

2138 South Sawyer Avenue
Chicago 23, Illinois

**TO YOUR
INDIVIDUAL
SPECIFICATIONS**

TRIANGLE PILLOW BLOCK



SHOCK
—ABSORBING BUILT-IN CUSHIONS

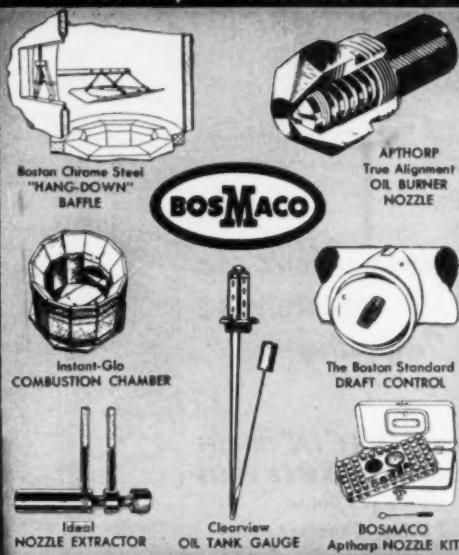
- ▶ For fans, blowers and other devices requiring self lubrication—perfect alignment—silent operation.
- ▶ Low prices include built-in, non-hardening cushions. It's all in the ball—no extra parts to buy or handle!
- ▶ Special Mountings Designed To Meet Specific Needs



Triangle Bridge-Tree Type Pillow Block.

TRIANGLE MANUFACTURING COMPANY
392 DIVISION ST. OSHKOSH, WIS.

FOR *Quality* INSTALLATIONS.



Boston Chrome Steel
"HANG-DOWN"
BAFFLE

BOSMACO

APTHORP
True Alignment
OIL BURNER
NOZZLE

Instant-Glo
COMBUSTION CHAMBER

The Boston Standard
DRAFT CONTROL

Ideal
NOZZLE EXTRACTOR

Clearview
OIL TANK GAUGE

BOSMACO
Apthorp NOZZLE KIT

WRITE FOR COMPLETE INFORMATION

BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

uneven process and depends on the law of gravity, and usually is made slower by bends and turns in the pipes. Therefore, your rooms are too hot one minute and too cold the next, because the heat does not circulate evenly."

"When attached to the furnace, the blower improves upon the law of gravity. It forces an even volume of warm air through the pipes at a steady tempo. At the same time, it draws cool air in the room through return air ducts and then forces this air back through the furnace and into the room again. This provides constant, uniform circulation. So, complete circulation is assured in every room regardless of its distance from the furnace. This means that floors are just as warm and as any other part of the room. There are no cold, drafty corners, or floors which are often starting points for many winter colds."

Another angle from which the health advantage can be approached is that of use of the filter within the blower package. "Mr. Prospect, you not only get even warmth throughout the home with a furnace blower, but you get *clean* heat. After the air is drawn from the returns leading to the furnace, it is passed through a set of filters within the blower which remove 85 per cent of dust, lint and pollen. This purified air is then returned to the furnace and from there into the warm air ducts leading to the room. When the filtered air reaches the room, most of the air-borne particles have been removed. The air is almost completely free from

TYPE "A"



TYPE "Z"
RECESSED



TYPE "A"



SEND, ON YOUR LETTERHEAD,
FOR CATALOG 493.

**Self-Tapping
Screws
Hold Better!**

**Use These
STAINLESS
STEEL
SCREWS**

Available in Standard
Diameters and Lengths
Types A or Z

Round • Pan • Stove
Flat and Oval Heads

Slotted or
Phillips Recessed
Heads

All Types of
STAINLESS RIVETS
Available, too

PROMPT DELIVERY



MANUFACTURERS SINCE 1929

ALLMETAL
Screw Products Co., Inc.

33 GREENE STREET, NEW YORK 13, N. Y.

PIPE AND FITTINGS GUARANTEED QUALITY!

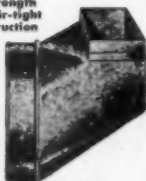
All Ajax fittings are made of high-grade, full gauge sheets . . . no seconds used! Quality is fully guaranteed. Your order, large or small, receives prompt, personal attention.



Scientifically designed
to reduce air friction

For help on your heating problems our engineering department is at your service. Contact us . . . we'll gladly work with you.

Double seamed
for strength
and air-tight
construction



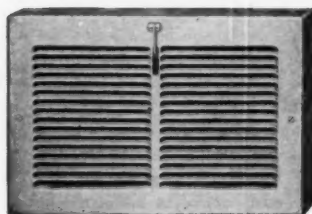
Write for catalog of Furnace Fittings.

Ajax Furnace Fitting Co.

Division of

The Cincinnati Sheet Metal & Roofing Co.
216-20 E. FRONT ST. CINCINNATI, OHIO

SAVE TIME By Using



AND
WATCH
YOUR
PROFITS
INCREASE

Here's a single valve register with adjustable fins that combines quality and economy. See how you can save on air conditioning and gravity base registers. Ask your supplier or write.

THE A & A REGISTER CO.

8327 Clinton Rd.

Cleveland, Ohio

Geo. G. Auer, Pres.

SIMPLIFY YOUR BUYING!

You can save TIME by combining your orders for Conductor Pipe, Gutter, and Accessories with your orders for Galvanized Pipe, Fittings, Registers, and Cast Iron Furnace and Boiler Repairs.

ACT NOW! Your ordering will be easier, faster, and more economical when you buy in one large order

from

Iowa's Largest Heating Wholesaler

**DES MOINES FURNACE
AND STOVE REPAIR CO.**

Des Moines, Iowa



Ask Your Jobber for **DIECKMANN**

ELBOWS
and
SHOES

"An angle for every
obstacle"

Made in 28, 26 and 24 gauge steel, hot dipped galvanized after formation. Also in Copper, Aluminum and Stainless Steel.

Sizes 1" to 6"—Angles
10 to 90 degrees.
Always uniform in size
and angle

One piece tapered with no protruding seams—a perfect and tight fit with any conductor pipe without soldering.

THE FERDINAND
DIECKMANN CO.

Established 1871

CINCINNATI 22, OHIO



Plain Round



Round Corrugated



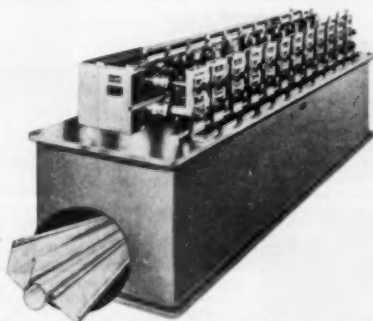
Square Corrugated
Style "A"



Square Corrugated
Style "B"

COMPLETE IN ONE PASS!

—formed shapes of any design—



You merely feed the flat strip into the machine—cut comes the finished shape.

- Production speeds up to 250 f.p.m.
- Machine shipped completely tested.
- No experience required to operate.

Sketch or sample will bring prompt proposal

Dahlstrom Machine Works, Inc.

4974 N. Elston Ave.

Chicago 30, Ill.

Roll Forming, Slitting, Straightening, and Cut-Off Machines

MARCO engineered recessed ventilating units



Only MARCO makes the **Filter-Fan** with lifetime washable filter

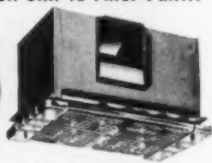
Stops grease from entering the fan or air ducts — traps it in an easy to clean metal filter. Reduces fire hazard, improves sanitation. Engineered for long, silent and efficient operation.

NOW! A companion unit to Filter-Fan...

A sparkling new beauty:

MARCO Bel-Air FAN

A competitively priced unit using the same efficient air-moving equipment as the Filter-Fan. In place of the filter, MARCO has designed a grille of great functional beauty and utility.



Write for bulletin giving complete specifications on MARCO Recessed Ventilating Units.

Bel-Air provides comfort plus Beauty

MARVIN MANUFACTURING CO.

3071 East 12th Street, Los Angeles 23, California

Sold Nationally through leading Distributors

Hammel

COMFORTAIRE Winter Air Conditioner

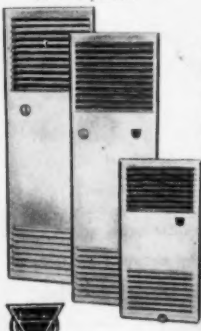
Representing the newest and finest in forced air, winter air conditioning. Gasfired and fully automatic, it combines winter heating and summer ventilating. Its compact design fits any plan and permits installation in a closet, small recess, basement or service porch.



CIRCULAIRE

The first fully vented, built-in single outlet and dual outlet wall heater in a complete range of capacities (11,500 to 50,000 BTU) and designed to fit into a standard 4" stud wall without framing. All units can be supplied, on order, for installation in a 6" stud wall.

Write for complete information and specifications to Dept. A.



Hammel
RADIATOR ENGINEERING CO.

3248 MITCHELL AVE. LOS ANGELES 24, CALIF.

household dust, the major cause of many allergies. This filtered air may also help to prevent that winter ailment, the common cold."

Cleanliness is another major advantage that can be pointed out to a prospect considering a furnace blower. The connection between cleanliness and health obviously will be the same — the use of the filters within the furnace blower. Most household dust comes from the various textiles found in rugs, upholstered furniture and bedding. These textiles are broken into tiny particles by constant contact and are set free in the air. If left uncontrolled these air-borne particles become a major dust problem. Here it is good to point out that the homeowner can have dust control in his own house at no additional cost.

Block—

(From page 171)

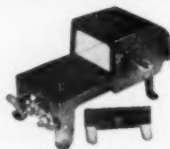
an allocation program covering steel for ten or eleven thousand freight cars per month, more than twice the current production, has been placed in effect. Another program for lake freighters is also under way. Programs covering the requirements of the locomotive industry, the petroleum industry, the electric power industry and others too numerous to mention, are now being discussed. By January priorities, allocations and our steel construction program will be biting into our company's schedules on certain important products to the extent

MORE HEAT FOR YOUR DOLLAR WITH JOHNSON BENCH SOLDERING FURNACES

1800°F. without forced air blast.

No. 101 Bench Furnace

The most efficient, powerful and economical bench furnace made for heating soldering coppers up to 12 lbs. per pair. Also used for heat treating, case hardening, and annealing carbon steels. Two burners. Firebox $3\frac{3}{4} \times 4\frac{1}{2} \times 5\frac{1}{2}$. Complete with work rest block and baffle plate. \$18.80 F.O.B. factory.



No. 118 Combination Bench Furnace

For heating largest soldering coppers, stenciling irons, branding irons, etc.; heat treating carbon steels, and soft metal melting. Lid on hood is removable for inserting 22 lb. pot for melting lead, tin, babbitt, etc. Two burners. Firebox $6\frac{1}{4} \times 5 \times 6\frac{1}{2}$. Complete with pot. \$35.00 F.O.B. factory.



WRITE FOR FREE LITERATURE

JOHNSON GAS APPLIANCE CO.
580 E AVENUE N.W. CEDAR RAPIDS, IOWA

ADJUSTABLE PIPE SNOW GUARDS



1. "FITRITE" ROOF STRAINERS.
2. "FITRITE" BRONZE BEEHIVE STRAINERS.
3. "FITRITE" SKYLIGHT GEARING.
4. "FITRITE" Adjustable Swing Chimney Jack Frame.
5. "PROTECTOR".
6. "FITRITE".

Also for Spanish Tile and Corrugated Roofs.



Installation of PROTECTOR SNOW GUARD

RIVAL STRAP CORP.

NEW YORK, N. Y.

RIVAL STYLE 8

RIVAL STYLE 8

"FITRITE" and "FITRITE"

Ornamental Leader Straps

COPPER & ZINC

in 6 styles

Write for folder and free samples.

Sold through Jobbers only.



SAW GUN

The Portable Tool for Sawing Stainless Steel, Asbestos Board Wood, etc.

See Mid-States ad on Page 248

To protect trade use your printed stationery.

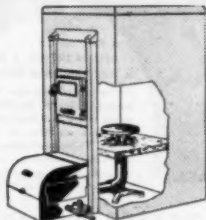
Write for prices.

DAVID LEVOW

306 West 20 ST
NEW YORK, N. Y.

ANCHOR

**FILLS
95%
OF YOUR
CONVERSION
TO GAS NEEDS!**



Adaptable to round or square furnaces, gravity or forced air, hot water or steam boiler. Easy and profitable to install. One size only with simple adjustment to regulate height of burner. Peak performance with natural, mixed or manufactured gas. Easily adapted to L.P. by changing part. Fully approved A.G.A. and meets your local regulations. Approved F.H.A. financing. One year factory guarantee. Keep your stock of floor samples complete. Order this Anchor No. G-75-AN today, or

Write for free, descriptive literature today!

ANCHOR DIVISION, STRATTON & TERSTEGGE COMPANY
P.O. BOX 311 NEW ALBANY, INDIANA

PLENTY of PROFITS with

KENT

Double Suction FURNACE CLEANERS



Your Kent is engineered for performance... brings you profits... does a real job! You get valuable leads on new installations and repairs too!

- Low center of gravity, less chance of tipping!
- No outside dustbag, no dust passes through land!
- Live outlet at switch for extension light!
- Kent is built to last!



See us at Booth 419
HEATING &
VENTILATING SHOW
January 22-26 —
Philadelphia

The KENT Double Suction Furnace Cleaner separates into 2 parts for easy carrying:

CLEAN WITH **KENT** EQUIPMENT

The KENT Co., Inc. • 435 Canal Street • Rome, N. Y.

Convert Gravity Furnaces With A CIRCULATAIRE Bonnet Blower



CIRCULATAIRE ELIMINATES COLD ROOMS,
BALANCES HEAT DISTRIBUTION. SAVES FUEL

CIRCULATAIRE solves the problem of "hard to heat" rooms, boosts warm air quickly through all the heating pipes. CIRCULATAIRE is easily and quickly installed without removing the bonnet. Packaged unit includes motor and fan control. No new sheet metal work required, no changing of cold or warm air pipes, no baffles to be built. The CIRCULATAIRE is rigid, quiet and efficient in operation.

NOW READY — Now CIRCULATAIRE Sales Aids add effectiveness to selling interview, conserves valuable selling time and increases sales.

A COMPLETELY PACKAGED UNIT
Nothing for the dealer to furnish except limited amount of labor.



GET THE FACTS TODAY! WRITE...

CIRCULATAIRE DIVISION OF CORLETT-TURNER CO.
1601 S. KOSTNER AVE., CHICAGO 24

Dealers **WRITE TODAY**
for
DETAILS AND FOLDERS
on the
COMPLETE LINE
of
Killam GAS BURNERS
for every
INDUSTRIAL
and
DOMESTIC USE.

- SIMPLE INSTALLATION
- MINIMUM SERVICING
- CUSTOMER SATISFACTION

Dependable for 35 years.

Killam GAS BURNER CO.
MANUFACTURERS AND HEATING ENGINEERS
★ 260 BROADWAY
DENVER 9, COLORADO



THREE OF MANY KILLAM MODELS

MULTI-JET SERIES

SECTIONAL SERIES

POWER-PAK SERIES



A COMPLETE LINE OF HAND BENDERS



No. 4 JK
Bar Bender

7 Models To Choose From!

There are JK benders for bending Angle — U — Bar — Eye and Awning Frames.

Send Today For Illustrated Catalog

The JAMES KNIGHTS Company
SANDWICH, ILLINOIS

of at least one-third of our production. These programs may soon require the preponderance of the nation's steel output.

All of them are being undertaken because they are regarded as defense supporting or essential industries. I have no desire to question the essentiality of any of these industries, but I wonder just where we are headed. A steel trade paper said last week "These creeping controls are now turning into a trot." It seems to me that we are rushing at full speed into a completely managed economy. If the NPA goes on allocating the requirements of every essential industry, one of two things will occur. Those industries left out in the cold will fold up and turn their employees out on the street, or else the NPA will have to divide up all the steel. Personally I would view either of these possibilities with much misgiving unless we are engulfed in total war.

In all-out war no one can properly question the great dislocations which come to civilian industry because of the necessity of directing vital materials to the most essential needs, and in all-out war it is not too difficult to catalogue these needs. But in times like the present, whatever they may be called, with direct defense steel absorbing only a small portion of the nation's steel, it is entirely a different matter. Before taking steps which could bring disaster to both labor and capital, it would be well to make sure that the increased requirements of these essential industries are really needed for adequate national defense. In many cases I believe the answer

Kirk-Blum

...one piece
BLOW PIPE ELBOW
SAVES YOU MONEY

- HOODS
- BALL JOINTS
- FLOOR SWEEPS • BLAST GATES
- STAMPED AND ROLLER ANGLE RINGS

Cheaper and stronger than the ordinary piece elbow, KIRK & BLUM'S One-Piece Elbows are rolled into a lock-seamed tube, then crimped on an exclusive machine to form a super tight, rigid elbow. These and other blow pipe parts, made in production quantities, are superior, cost less than the ordinary kind. Made in light to heavy gauges, from 3-inch to 14-inch diameter. Write for literature and prices.

THE KIRK & BLUM MANUFACTURING CO.
2880 Spring Grove Ave. • Cincinnati 25, Ohio




Ball Joints
Any Size

ALMAR EASY SLITTER

FOR USE WITH BRAKE OR BENCH

Speed up your work—without an 8' or 10' Square Shear

The Rotary action of cutters produces a neat, accurate clean edge.



PRICE—COMPLETE
Almar Easy Slitter

with cutting head & track

8' Brake Type	—	\$75.00
8' Bench Type	—	\$85.00
10' Brake Type	—	\$85.00
10' Bench Type	—	\$95.00

F.O.B.—Chicago, Ill.

WARD MACHINERY COMPANY

564 W. WASHINGTON BLVD.

CHICAGO 6, ILLINOIS



PENN-AIRE FURNACES

Winter Air Conditioning and Gravity

CAST IRON, COAL FIRED

Popular Price

Practical Design

Economical Operation

UNION MANUFACTURING CO. INC.
Boyetown, Pa.

NOW

Exclusive . . .
sales territories



BOOMER *cast iron*
and
STARK *steel*
FURNACES

Units for coal, gas or oil —
forced air or gravity
WRITE FOR DETAILS

THE HESS-SNYDER CO.

MASSILLON, OHIO

MANUFACTURERS OF QUALITY FURNACES SINCE 1880



- A practical, accurate air velocity meter for heating, air conditioning, and ventilating work. Indispensable for measuring grille velocities and air deliveries from registers and grilles; for balancing forced air heating systems, and for checking air distribution of all kinds of ventilating systems.
- Accurate velocity readings, automatically averaged over a 3" dia. free area, instantly indicated in feet per minute.
- Extension handle facilitates positioning of instrument away from the observer for readings in hard-to-reach locations, or where the observer's body would interfere with the normal air movement.
- Unique scale lock makes possible to retain scale reading when desired until the lock is released—an indispensable feature where extension rod is used to position instrument away from the observer.
- Leather case is furnished as standard equipment for added protection when the instrument is not in use and for convenience when carrying it in the pocket.

Ask your Jobber for the Florite or write for Leaflet 760.

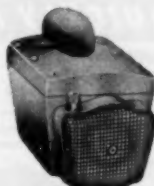
BACHARACH INDUSTRIAL INSTRUMENT CO.
7000 BENNETT STREET • PITTSBURGH 8, PA.

Quality stands the test...

This has been proved by the Little Giant Vaporizer and the Little Giant Vaporizer Pump, the first hermetically sealed units. For many years these fine products have been giving efficient, trouble-free service. THE LITTLE GIANT VAPORIZER breaks and projects water in a fine, vapor-like spray. No more efficient unit can be found for use in evaporative coolers, for humidity control, or for cooling condenser coils. THE LITTLE GIANT VAPORIZER PUMP is a small, compact recirculating pump for a variety of uses requiring low-pressure, high-volume performance. The motors of both units are hermetically sealed in a five year's supply of oil. The motor housings are of die-cast aluminum, treated against corrosion in any water. Both units carry a two year guarantee against faulty material or workmanship.



LITTLE GIANT VAPORIZER



LITTLE GIANT VAPORIZER PUMP

Little Giant Vaporizer Co., Inc.
5101 CLASSEN BLVD. OKLAHOMA CITY

NEWS YOU'LL WANT!

Say! it's that low-cost, automatic

Majestic BASEMENT UTILITY FURNACE

Another model in the popular
line of packaged forced-air
heating plants for SMALL HOMES

for OIL
(90,000 BTU
output)

or GAS
(90,000 BTU
input)

Specially designed for
LOW BASEMENTS
Features the
Majestic
Perfect Flame
DRAWER-TYPE BURNER

FREE bulletin tells all. Write

The Majestic Company, Erie St., Huntington, Indiana
"Heating Specialists Since 1907"

might properly be in the negative. Do you recall the great governmental pressures which were exerted two years ago to get essential steel for the now defunct Lustron Corporation? Do you remember the hue and cry for steel for freight cars in 1947 and 1948? It was alleged that the needs were so great that the car builders would be running full for five or ten years. Yet, in 1949 they ran out of orders, and it took a war to get their order books full again. I mention this intending no particular criticism of the present freight car program but merely to illustrate the harmful effects that can result from unduly expanding the production of certain selected industries by government fiat.

But the irregularities of business operations and of employment are by no means the most harmful effects that accrue from unnecessary and excessive tinkering with the economy. Worst of all is the threat to freedom. No one who has had even the slightest experience in operating economic controls will deny that each control begets a series of other controls. They multiply like rabbits. And, as we have seen all too clearly in other countries, once they fully infect the body politic, the disease becomes incurable. This is the real danger from a comprehensive system of government priorities and allocations. It behooves all true lovers of freedom in and out of the government to take care that the "patient" does not die from too successful an operation."

One more thought on this subject of distribution—if there must be controls, and there must be some as long

Heating
Sheet Metal



Air Conditioning
Supplies

Furnace pipe, adjustable
elbows and Fittings

ALSO: Complete line sheet metal hand tools

Frank X Enderle, Inc., Ltd.

1600-1700 San Fernando Road, Los Angeles 41, Cal.

**CLEAN SWEEP SOOT REMOVER
HAS A NEW NAME**



It's still the same fine product that you can depend on for customer and service satisfaction
MILLER PRODUCT COMPANY
P. O. BOX 156 LANSING 9, MICH.

Successors to The Clean Sweep Co.

"LOOK FOR THE BROOM ON THE PACKAGE"

QUICKLY AND EASILY INSTALLED - -

REX RoTo Combustion Chambers

IN ANY STYLE FURNACE—WITH ANY MAKE BURNER

The user benefits through higher combustion efficiency and longer life. The installer through the easy and quick installations. No cutting or cementing necessary.

"NO BREAKAGE" PACKAGING

REX ROTO Combustion Chambers are individually packed in our exclusive TIME TESTED-CONSUMER APPROVED shipping container. It is designed to withstand numerous handlings.



REX RoTo CORP. 14400 DEXTER BLVD.
DETROIT 6, MICHIGAN



PIPE and FITTINGS

Prompt Deliveries

Moncrief provides a dependable Southern source of supply for galvanized pipe, elbows and fittings for both round and rectangular ducts. Southern Furnace Dealers and jobbers, write for catalog and discounts.

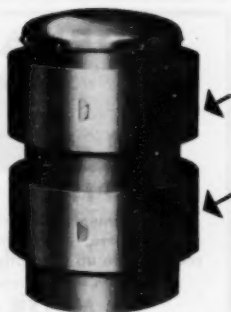
MONCRIEF FURNACE CO.

P. O. Box 1673 Atlanta, Ga.

For positive drafts
sell the NEW exclusive

Coleman twin ring CHIMNEY CROWN

• Prevents downdraft. Makes use of air currents from any angle or direction to create suction for a positive, even draft. Increases heating efficiency without waste of heat or fuel. Helps keep chimney dry and clean. Neat, no noisy moving parts. In 6 sizes from 4" to 9" in diameter.



Also new Coleman Adapter to simplify installation — makes Coleman Chimney Crown fit 90% of chimneys. Available from most hardware jobbers.

Write for complete description and prices

THE COLEMAN COMPANY, Inc., Wichita 1, Kansas



8-inch
\$2⁹⁵

VICE-GRIP Sheet Metal Tool

Here's the most useful tool ever developed for sheet metal workers. LOCKS to work with a grip many times greater than ordinary tools. Eliminates tiresome hand gripping. Just LOCK the tool to work and bend, form, seam, crimp, straighten. Does every job easier, more accurate, faster.

Order from your supplier

Manufactured

Only By

PETERSEN MFG. CO. INC.

Dept. AA-1

DeWitt, N.Y.



**LARGEST
in the
WEST**

REPRESENTING

Acme Electric Welder Co.
Benchmaster Manufacturing Co.
Bertsch & Company

Beverly Shear Manuf. Co.
Clearing Machine Corp.

Dahlstrom Machine Works
Drels & Krump Manuf. Co.

E. O. Grabe Machine Works
Johnson Machine & Press Corp.
Libert Machine Company

The Lockformer Company
The Pock, Stow & Wilcox Co.

Rotex Punch Company
San Angelo Foundry & Machine Co.
The V & O Press Company

The Van Dorn Electric Tool Co.
Whitney Metal Tool Company

Electric Spot Welders
Bench Presses; Automatic Feeds
Squaring and Gap Shears; Plate
Bending Rolls

Universal Shears
Mechanical Presses & Hydraulic
Presses
Multiple Roll-forming machines;
Gang-Slitters
"Chicago" Hand and Power
Brakes; "Chicago" Power Press
Brakes; Press Brake Dies

Metal Spinning Lathes
Open Back Inclined Presses
Sheet Metal Shears; Circle
Cutters

Pittsburgh's Le's Forming
Machines; Easy Edge
"Pexis" Timmer's Hand and
Power Machinery; Power Squaring
Shears; Fast Shears
To ret Punches

"Loom" Slip-Roll Forming
Machines

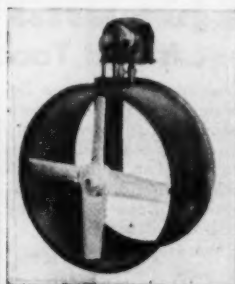
Notching Presses; Dial Feeds;
Roll Feeds; Open Back Inclined
Presses
Portable Electric Shears, Drills,
Grinders; Sanders
Portable Punches; Shears,
Sanders and Notchers for
Angles; Kick Presses; Deep
Throat Power Presses

Write for Catalog

Meyer Sheet Metal Machinery Company
1928 SANTA FE AVE., LOS ANGELES 21, CALIF.

as the supply is tight, for as I said the direct defense needs must be met, then such controls as are required must be properly administered. Such administration, as far as steel is concerned can only be directed by men who know steel. When I was first in Washington during the last war the established policy of the government was exactly the opposite. At the outset no one from an industry could head that industry's division or even have an acknowledged position of authority in it. All that was changed as the war progressed, but in the interim much valuable time was lost, many serious mistakes were made, and we were the laughing stock of those who understood what was going on, including our own allies, the British and Russians.

The idea seemed to be that because men received their pay from their corporate employers they could not be as patriotic or as honest as those whose names appeared on the government payrolls. What an absurd idea! One might as well have called in Toscanini to lead the New York Yankees or Joe Louis to take charge of General Electric, as have men from other industries, or government career men who never were in any industry, make and administer the rules for steel. Yet this philosophy persisted before and, in spite of strong opposition by such able men as Secretary Sawyer and General Harrison, it could again become the policy of the government. In fact, the Executive Order issued by the President last week, limiting the function of men



Try AIRFAN

FOR REAL PERFORMANCE

You'll never know what real performance on your jobs is like until you've used AIRFAN units. Write us and we'll be glad to send you more complete information.

◀◀ The AIRFAN Spray Booth unit will exhaust more fumes and paint spray vapors against high resistance with less horsepower. The motor is mounted outside air stream to make this unit explosion-proof.

At right is the AIRFAN >>> Air cooler — 2000 to 12000 CFM series. Correctly designed so maximum air at least resistance can flow through louvered grilles with minimum horsepower. Pans die drawn of one-piece special steel. Heavier gauge material than found in any other make.



AIRFAN ENGINEERING CO.

7403 ANAHEIM-TELEGRAPH RD., LOS ANGELES 22, CAL.

IMPROVED!



Pat. No. 2440528

• B B •
No. 12 SHANK
33 1/3% STRONGER

IMPROVEMENT IS APPLIED TO
No. 12—SQUARE, No. 15—W
PITCH, AND No. 25—1/4 PITCH.

SOLD THRU LEADING
JOBBER EVERYWHERE

BERGER BROS. CO.

Main Office & Factory
229-237 Arch St., Philadelphia, Pa.

Copper - Brass - Bronze
Perforated
TO YOUR REQUIREMENTS

PERFORATED METALS
FOR ALL INDUSTRIAL USES
ARCHITECTURAL GRILLES
SEND FOR CATALOG #35

DIAMOND MFG. CO.

BOX 34

WYOMING, PA.

Sheet Metal Machinery

Pittsburgh Lock Machines

Stovepipe and Elbow Machines

Roll Forming Machinery and Dies

Maplewood Machinery Co.

2634 Fullerton Avenue
Chicago, Ill.

ORNAMENTS



STAMPINGS & SPINNINGS

Zinc Ornaments Available From Stock. Copper, brass, bronze, aluminum and stainless steel ornaments made up promptly.

If you don't have catalog K, send for it NOW.

MILLER & DOING

89 ADAMS STREET

BROOKLYN, N. Y.

ARE YOU PREPARED?

MODEL No. 300

U. S. GOVERNMENT CONTRACTS

require the use of Government Locks for all heating and ventilating air ducts.

THOR GOVERNMENT LOCK DIES

shear — punch a 5/32" hole — and mark point at breakline all in one operation. No waste of time for punch press set-up.

Model No. 100, Capacity 22 ga. \$ 85.00

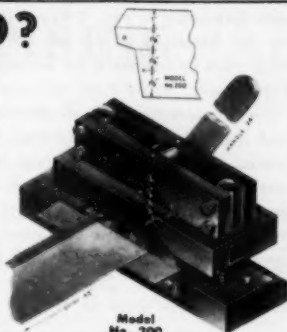
Model No. 200, Capacity 18 ga. \$160.00

THOR UNIVERSAL CLIP PUNCH — Model No. 300

Capacity: 3 sheets of 20 ga. mild steel. A fast efficient tool for fastening government locks and standing seams in all kinds of sheet metal work. Price \$35.00

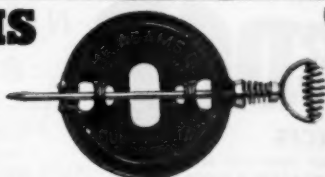
See your local dealer or write for literature and samples of metal sheared in above tools.

Thor Tool and Die Co., 3444 Morrison Ave., Oakland 2, Calif.



ADAMS

Sizes from
3 to 18 inches



Diamond Smoke Pipe Damper

Buy Adams Known Quality

THE ADAMS COMPANY

Bridge Street • Established 1883 • Dubuque, Iowa



CLIMATEMAKER HEAT LOSS CALCULATING SLIDE RULE

Gives the RIGHT Answers QUICKLY to:

- ★ B.T.U. heat loss per room. ★ C.F.M. required per room. ★ Pipe area, pipe and stack size for forced or gravity warm air heating. ★ E.D.R. of steam and hot water. ★ Blower size. ★ Figures outside design temperatures from 40 Below to 40 Above zero. Designs based on zero to 70°.

Easy to learn—Simple to use. ORDER NOW—
Copyrighted in U.S.A. and Canada. Checks on Canadian banks accepted at par.

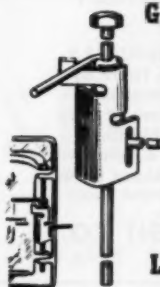
CLIMATEMAKER SLIDE RULE COMPANY, Not Inc.
1404 E. Washington St. Bloomington, Ill.

classified advertising . . .

Is the quick, economical way to find what you're looking for. Check the classified page each and every issue for real bargains and hard to find items. It's a quick and sensible means too, of disposing of tools, equipment, and anything else for which you no longer have use. Check the classified page for rates.

Why be in the dark?
see the inside back cover

GET SAFETY AND SIMPLICITY FOR CONVERSION JOBS WITH REDDY-ON SAFETY SPRINGS



Backfire and puff pressure is safely dissipated by the Reddy-On Safety Spring. It holds door closed, and in open position for servicing, and comes with factory-set tension for easy installation. Available 3/16" to 1/4". Special adaptor for boiler and inside hinged furnace doors. Write or wire for details.

LEISUR-MAID MFG. CORP.

338 Wealthy, S.W., Grand Rapids, Mich.

MOREY FLOAT VALVES

Made Right Priced Right

List
Price
1.50



Packed
in
Dosen
Lots

Morey Valves close against pressure. Each operation washes neoprene seat. 1/4" pipe thread outside, 1/4" inside. Brass body 2 1/4" x 3" copper seat or 4" x 5" oval flange. The ideal float valve for evaporative coolers, poultry feeders, small cooling towers and evaporative condensers.

Overall increase in Morey Valves in 1950 about 1500%

Write for trade discount on

The Morey line of Recirculating Pumps, Cooler Pads, Float Valves, Special Woven Netting and Aspen Excelsior.

DAN MOREY

814 S. Robertson Blvd.
Los Angeles 35, California

who serve without compensation to advisory work only, seems disturbing to me. I do not believe it can possibly give the American people the full benefit of the skills which must be harnessed for the country's good in times of emergency.

The preponderance of all Americans everywhere are loyal, patriotic and honest. And the men of the steel industry are second to no others on this score. Their record in World War II, both in Washington and on the home front, gives ample evidence of this. I can also say from my own experience that when one serves in Washington he serves in a well-lighted goldfish bowl. That is as it should be. So, how anyone can conjure up worries on this score is beyond me. The new law

explicitly provides for experts from industry to serve the defense program without compensation. The steel industry is willing to furnish such men, and a highly competent group has already been provided to the NPA. I sincerely hope they will be given a full and continuing opportunity to use their talents in the nation's best interests.

Yes, the mills and the men of the steel industry are ready and able to do the defense job. And if the American people maintain their economic freedoms as firmly as their prized civil liberties, and the two are inseparable, they may feel secure in the knowledge that their steel industry will continue to be a bulwark of strength in peace and in war.

FEW AS
GOOD

1876 — 1931
GILTEDGE
FURNACES

NONE
BETTER

BLOWERS
CONTROLS
REGISTERS
PIPE
FITTINGS

ROUND AND SQUARE CAST IRON AND STEEL
HOME SIZE INCINERATORS
ANYTHING AND EVERYTHING FOR THE FURNACE MAN

GAS BURNERS
OIL BURNERS
GAS FURNACES
OIL FURNACES

All genuine Gilt Edge repairs carry a label saying "Genuine Gilt Edge Part." We have genuine Gilt Edge repairs—
for all Gilt Edge Furnaces and Boilers

A few exclusive Gilt Edge territories open to dealers on Gilt Edge heating equipment

SCHWAB FURNACE CO.

332 WEST FLORIDA ST.
MILWAUKEE 4, WISCONSIN

**MILTON
SHEET METAL MACHINERY
SPECIALISTS**

DO YOU HAVE PROBLEMS ???
We Can Help You Solve Them By
Furnishing The Proper Machines.
We Carry A Complete Stock of New
& Used Hand & Power Machines.
We Stock Punches & Dies & Adapters
For All Presses & Brakes, Shear Blades
& Spot Welder Tips & Hand Tools

MILTON EQUIPMENT CO.
N.E. Cor. 4th & Race Phila. 6, Pa.

Give Your Clients More Fuel "Mileage"
You earn more repair jobs

Continuous hard operation breaks down heating plants. They require just as much consideration as the family car.

A Super Red Streak Furnace Cleaner cleans all kinds of heating plants. Super cleaning gives more heat per unit of fuel and, most important, reveals the need of repairs and replacements. Chimney cleaning tools are standard equipment. Suction tube scrapers available for fire-tube boilers. The FREE SUPER Sales Plan Book gives you all details on how to build a profitable furnace cleaning business. Ask your supply dealer or write for our 5-day free trial offer.



National Super Service Co., Inc.
1944 N. 13th St., Toledo 2, Ohio

SUPER SUCTION

SINCE 1911
"THE DRAFT HORSE OF POWER SUCTION CLEANERS"



MANUFACTURERS OF
**FURNACE PIPE
AND FITTINGS,**

Prefabricated Ducts,
also conductor pipe, eaves
trough, drip edge, rake strip, etc.

THOR METAL PRODUCTS CO., INC.

Box 118 Eastwood Station Syracuse, N. Y.



**HEAT THAT
COLD ROOM**

This self-cooled booster fan will do the job better because it's ventilated. Oil only twice a year without removing the fan from warm air pipe. Long lasting, quiet, efficient, runs on house current, weighs only 11 1/2 lbs. Fits pipe sizes from 8" to 12", very simple to install. Can be operated with switch, automatic fan control or thermostat. Thousands now in use. Ask your jobber today or write us for prices. Insist on McLarty, the only ventilated booster fan on the market.

McLARTY SYSTEMS

201 W. Mich. Ave.
Battle Creek, Mich.



CLASSIFIED ADVERTISING

Classified Section: Rates for classified advertising are 10 cents for each word, including heading and address. One inch \$5.00. Count nine words for keyed address. Minimum \$2.00 for each insertion. Cash must accompany order.

lines wanted

LINES WANTED

Aggressive Sales and Service Organization covering 50 mile radius, Madison, Wisconsin desires direct factory connections in Heating, Plumbing and Air Conditioning. Address Key #839, American Artisan, 6 No. Michigan Ave., Chicago 2, Ill.

classified advertising...

Is the quick, economical way to find what you're looking for. Check the classified page each and every issue for real bargains and hard-to-find items. It's a quick and sensible means too, of disposing of tools, equipment or anything else for which you no longer have use. Check the classified pages for rates.

wanted

WANTED: Shearings any amount — all sizes Galvanized, cold and hot rolled aluminum, Stainless and copper 6" minimum width 36" minimum length, uniform quantities. Gauges from 16 to 30 inclusive.

Write or wire

Los Angeles Sheet Metal Mfg. Co.
901-905 East 9th Street, Los Angeles 21, Calif.
Trinity 4713

for sale

HEAVY DUTY POWERFUL FURNACE VACUUM CLEANER (no bags needed) only \$89.50. Rush check with order. Fully guaranteed. Write for special low prices on oil and gas burners. Hasko Utilities Company, 879 Tenth Ave., New York 19, N. Y.

for sale

For Sale: General Sheet Metal business, Metropolitan Washington D.C. Area, wonderful opportunity, 3200 Sq. Ft. very reasonable rent. Nice set up for light mfg. and heating. Address Key #840, American Artisan, 6 No. Michigan Ave., Chicago 2, Ill.

Gas conversion burner manufacturing business for sale. Firmly established and selling in 25 states since 1945. Meets fully latest AGA requirements. Will sell patterns, dies, etc., all rights, and AGA listing to responsible persons or organization, on terms, at a bargain price. Burner is manufactured under contract with large firm, who makes drop shipments for owners. Can be operated by two persons. Address Key #838, American Artisan, 6 No. Michigan Ave., Chicago 2, Ill.

FOR SALE—Have overstocked on the following items. Will close out at 25% discount below your current cost. Lennox Prefab duct fittings. Boots and transitions. Welding Rods. Controls of all types, Heating, Stoker and Refrigeration. Nuts, bolts, and shields. Tinned rivets. Miscellaneous Sheet Metal Tools. Write for quotations. Address Kuhr Brothers, Inc., Savannah, Georgia.

For Sale: 800,000 yards cheese cloth. Widths —36 to 48 inches. Dan Morey, 814 S. Robertson Blvd., Los Angeles 35, Calif.

American Artisan

SERVICE SECTION

GRAND RAPIDS FURNACE CLEANERS

Write for Details
DOYLE VACUUM
CLEANER CO.
227 Stevens St., S.W.
Grand Rapids 7, Mich.



Rates for display space in the Service Section are \$10.00 per inch per insertion. One-inch minimum space accepted.

ALL STYLES

WILLIS SKYLIGHTS are designed to give a maximum of light with perfect ventilation. Constant improvement for over forty years, guarantees WILLIS customers greater value, both in construction and workmanship.

Willis skylights are constructed with condensation gutters on all bars and at the eaves to carry



NO. 705

WILLIS STEEL CORPORATION

SKYLIGHTS

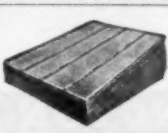
away the moisture. They are water-tight without the use of putty and are easily installed on old or new buildings.

Our engineering department will be glad to assist you in your skylight problems.

SEND FOR CATALOG

Established in 1891

ALL SIZES



NO. 505

Galesburg, Illinois

IT'S CHIMNEY TOP TIME AGAIN



For Better Chimney Draft And Improved Stack Performance Use.

ACCURATE REVOLVING VENTILATORS

Positively Prevents Downdraft — Storm And Rainproof — Simple in Design — Durable in Construction

The Best Ventilator For The Lowest Price STOCKED BY YOUR JOBBER SEND FOR LITERATURE TODAY

ACCURATE SHEET METAL & MFG. WORKS

2336 Milwaukee Ave. — CHICAGO 47, ILL.

SERVICE SECTION

SHEET METAL MACHINES & TOOLS

- LOCKFORMERS -

● Chicago Steel Hand Brakes ● Chicago Steel Press Brakes ● "Rex" Spot Welders ● "Pexto" Shears. Folders, Rolls, Rotary Machines, Etc. ● Whitney Tools & Machinery ● Marshalltown Throatless Shears ● Electric Shears, Drills ● Shop Tools ● Smith Cleat Benders

Complete Line of Sheet Metal and Ventilating Supplies



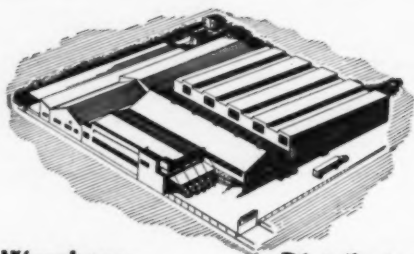
WHEN IN CHICAGO VISIT OUR
MACHINERY SHOWROOMS

CENTRAL-WEST MACHINERY CO.

335 SO. WESTERN AVE.

Haymarket 1-8360

CHICAGO 12, ILL.



Warehouse Distributors

**HEADQUARTERS FOR
MAZE ZINCLAD NAILS**

**INDEPENDENT
SCREWTITE AND STRONGHOLD NAILS**

**GALVANIZED, STAINLESS, COPPER,
ALUMINUM AND BRONZE NAILS**

All Types — All Sizes

**SPECIALISTS in FASTENINGS for the Roofing,
Sheet Metal, Plastering and Building Contractor**

AT YOUR SERVICE, ALWAYS!

POTTS-FARRINGTON CO.

FORMERLY W. F. POTTS SONS & CO. INC.

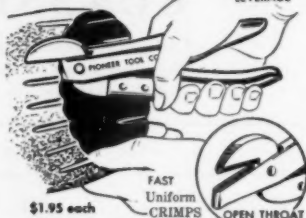
4250 WISSAHICKON AVE., PHILADELPHIA 29

PHONE Baldwin 3-1886

"LITTLE GIANT"

Pipe Crimping Plier

POWERFUL
LEVERAGE



\$1.95 each

FAST
Uniform
-CRIMPS

OPEN THROAT

Send check or M O if your Jobber can't supply. Other handy Pioneer Tools — Steel Beam Trammels — Do-Mor Saw Handle & Blades — Gutter Clamps
Pioneer Tool Company
1103 Wisconsin Ave., Racine, Wisconsin
Send for Literature

FOLDING BRACKES

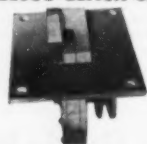
Form angles, flanges and Pittsburgh I-beams. 26 gauge steel. Cam locking. Can be bolted to bench, or edge of truck. All steel, reinforced. Shipped Express Collect, 30" size, Wt. 54 lbs., \$26.50, 50" Wt. 66 lbs., \$31.00; 45", 100 lbs., \$45.00. Floor mounting, 32" high, \$7.00 extra. Order direct, cash, or C.O.D., or send for folder.



VYKE BRAKE CO.

T-1116 S. 27th St., Omaha 5, Nebraska

THE BESCO BENCH SHEAR



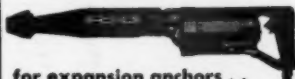
is POWER DRIVEN will SPEED UP YOUR PRODUCTION can INCREASE YOUR PROFITS is MOUNTED IN THE WORKBENCH will CUT ANY LENGTH—IT'S THROATLESS can SHEAR ON STRAIGHT OR CONTOUR LINES has a MAXIMUM CAPACITY OF 18 GAUGE (mild steel) is LOW IN COST & HIGH IN VALUE is SMALL & COMPACT WEIGHS ONLY 6 1/4 lbs. WARRANTS YOUR INVESTIGATION TODAY

Write now for literature and further information

BESCO MFG. CO.

BOX 1163-A CINCINNATI 1, OHIO

How to drill concrete



for expansion anchors . .

You can drill holes thru concrete walls, floors, ceilings, 12 to 15 times faster than by hand. Use the Wodack DO-ALL Electric Hammer. Typical example: drills a 3/4" hole 1" deep thru average concrete in less than 15 seconds! Saves time and money. You also use Wodack DO-ALL for chiseling concrete, drilling wood, metal, etc. Investigate.

WRITE TODAY FOR BULLETIN 473-AA

Wodack Electric Tool Corporation

4627 W. Warren St., Chicago 44, Ill.



A TIME SAVER CHAMPION DRAW PIPE CRIMPER

Length—14 Inches Weight—one lb. 10 oz.
Crimps plain round, square and rectangular pipe—quickly, perfectly and easily. Can be used in the shop or carried conveniently in the tool kit to outside jobs. Appreciated by those who install warm air furnace pipe, wall stacks, air ducts, smoke conductor and water heater vent pipe, etc. Price \$3.50 f.o.b. Factory. A tool of real merit, in fact "it's clever."

Jobbers and Installers:
Write for full details today
Champion Tool Company
4261 So. Broadway, Los Angeles 37, Calif.

**USE THIS SECTION
CONSISTENTLY . . . IT WILL
PAY YOU WELL!**

SERVICE SECTION

HEATING CALCULATOR



Solves Heating Problems Accurately

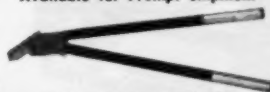
Works like a slide rule—reads like a chart. It's simple, easy and fast! Figures heat losses—warm air layouts—hot water and steam radiation. Price \$4.00 including valuable booklet.

CALCULATOR SPECIALTIES CO.

122 S. Michigan Ave. Chicago 3

HANDY TOOLS AND EQUIPMENT

Available for Prompt Shipment



A NEW CLIP PUNCH

For fastening slips or seams on ducts. Will push a "half moon" through 3 thicknesses of 18-ga. steel. No hammering or flattening out to fasten slip to the duct.

A DRIVE CLEAT NOTCHER

For notching drive cleats up to 3 in. in width, 22-ga. or lighter. Can be operated by hand or foot or can be easily mounted on the bench or on the job with clamps or bolts and screws.



Distributed exclusively by
REINER & CAMPBELL CO., Inc.
671 Norwood Terrace, Elizabeth 2, N. J.

TOOLS for the ROOFING CONTRACTOR

AXES
BEAMS
BRACKETS
BROOMS
BUCKETS
CALKING GUNS
CALKING CEMENT
DIPPERS
HATCHETS

HOISTS—PORTABLE
HOISTING WHEELS
HOOKS
INSULBRIC CUTTERS
KETTLES
KNIVES
LADDERS
LADDER JACKS
KNOT BRUSHES

MOPS:
JEWEL
FREY PATENT
CABLE CORD
SOFT YARN
GLASS
MOP BELLS
MOP HANDLES
NAILS, CONCRETE
ROPE
SCRAPERS
SLATERS' TOOLS
TROWELS
WHEELBARROWS

FRANK P. FREY & CO.

2634 W. MADISON STREET

CHICAGO 12, ILLINOIS

EVERYTHING FOR FABRICATING IMMEDIATE DELIVERY

PRESS BRAKES

10' 3/16" Cap. CHICAGO STEEL:
10' 6" Bed & Ram. Whistler Die Set
10' 1/4" UNIVERSAL HYDRAULIC:
No. 2062 VERNON: 78" 14 Ga., 62" Bed.
No. 2050 VERNON: 68" 14 Ga., 50" Bed.
No. 1062 VERNON: 52" 14 Ga., 62" Bed.
78" Bed & Ram
No. 125 CHICAGO STEEL: 32-1/2" bed
& ram
5' 10 Ga. CHICAGO STEEL: Wide Bed

BRAKES, POWER APRON

No. 203 D. & K.: 10' 12 Ga.
No. 2048 D. & K.: 10' 10 Ga.

BRAKES, HAND

10' 18 Ga. DREIS & KRUMP:
NEW No. 420 & 520 CHICAGO STEEL:

SHEARS, POWER SQUARE

8' 10 Ga. OHL
6' 14 Ga. PARKER — PEXTO
No. 748 NIA.: 8 Ga., 4' 3/16" Cap.

NIBBLERS

No. 326 SAVAGE: 3/8" Cap., 36" thr.
No. 1 GRAY: 3/16" Cap., 34" throat

OBI PRESSES —

All Types — All Sizes
No. 3036 PARKER DOUBLE CRANK
PRESSES:
Late type. 30 Ton. 2" stroke.
10' Shut Height. 12" x 37" Bed



Verso Press
Brake

ROLLS, POWER

60" BUFFALO INITIAL TYPE THREE
ROLL: 1/4" Cap., 7" Dia. Rolls
8" BERTSCH HAND SLIP ROLL: Three
Roll type. 18 Ga. Cap., Drop End.
No. 355 NIA. INITIAL TYPE SLIP
ROLL FORMER: New 1945. 5' 14 Ga.
Model 0428F PEXTO INITIAL TYPE
SLIP ROLL: 5' 14-18 Ga. Cap.

WELDERS, SPOT NEW REX WELDERS IMMEDIATE DELIVERY ALL TYPES — ALL SIZES

250 KVA SCIAKY: AP Projection.
20" thr., 220 volt
100 KVA FEDERAL PROJECTION: Air
Operated. 8" thr.
100 KVA THOMSON ELECTRIC: M.D.
Press Type. 12" thr., 440 volt
75 KVA THOMSON ELECTRIC: M.D.
Press Type. 440 volt, 12" thr.
50 KVA REX M.D. ROCKER ARM:
20" thr., 8 Ga. Cap. or lighter
30 KVA GIBB: 28" thr., 220 volt

Our "BLUE BOOK" lists and illustrates
all Types of Metal Working Machinery
SEND FOR YOUR FREE COPY TODAY

Write, Wire or Phone YARDS 7-5800 for full quotations

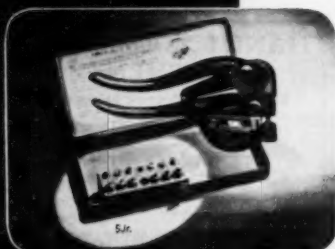
Eastern Office — 2829 N. Broad St. — Philadelphia, Penna.

INTERSTATE Machinery Co., Inc.

1433 W. PERSHING RD., CHICAGO 9, ILL.

WHITNEY-JENSEN TOOLS

41 YEARS EXPERIENCE

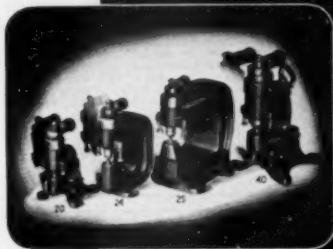


**No. 5 Jr.
Hand
PUNCH**

This lightweight tool has won wide acceptance because it is durable, powerful, easy-to-use. An adjustable locating stop permits quick setting to any throat depth up to 3". Furnished complete with seven punches and dies in strong metal carrying case. Capacity — $\frac{1}{4}$ " hole through 16 ga. mild steel. Weight — 2 $\frac{1}{2}$ lbs.

**Nos. 20, 24, 25, 40
Ball Bearing
PUNCHES**

Screw press action with ball bearings in the race give tremendous punching power in comparatively lightweight tools. No. 20, for example, develops punching pressure of 39,500 pounds. Replacement ratchet handles available for Nos. 20, 24, and 25; bench bases for Nos. 20 and 40. For working metal $\frac{1}{8}$ ", $\frac{1}{4}$ ", and $\frac{1}{2}$ " thick.



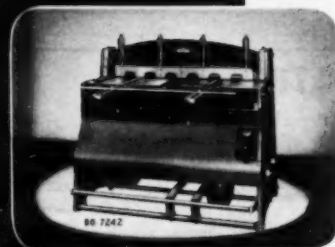
**Nos. 10-11-12
Ball Bearing
PUNCHES**

Punches with portability and power combined. Because of ball bearing screw principle, each develops over 14,000 lbs. punching pressure. No. 11 is identical to No. 10 except for tubular handles which are used for carrying extra punches and dies. No. 12 has higher and deeper throat for punching channels. Capacity (all models) — $\frac{1}{8}$ " hole through $\frac{1}{2}$ " mild steel.



**Nos. 7-7 $\frac{1}{2}$ -8
Roller Bearing
PUNCHES**

Versatile, powerful, lever-type punches with roller bearings. Will punch and strip positively inside 90°. Quick change punches and die. Lever cannot become disengaged by moving tool in either direction. Universal swivel bases (with work table) available for bench use. For working mild steel up to $\frac{1}{4}$ " thick.

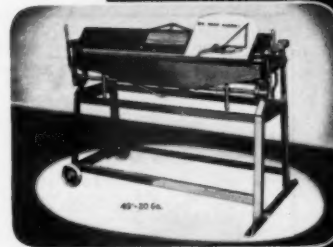


**No. 72 Series
Power Squaring
SHEARS**

Fast, dependable machines for jobbing or production work. All models feature flywheel and motor enclosed between steel plate housing, high speed for production runs, simplified blade adjustment. Available in four sizes. Widths of 36" and 48" have 16 ga. capacity; 42" width has 14 ga. capacity; 60" width has 12 ga. capacity.

**49-in. 20 ga.
Bending
BRAKES**

Portable or stationary bending brakes that form a $\frac{1}{2}$ " flange in 20 gauge mild steel their entire length. Made in two styles — for straight bending or for combination box and pan work as well as straight bending. Combination roller bearing bending brakes — in 18 gauge or 16, 14, 12 gauge capacities — are also available.



**Nos. 1828-1829
1858-1868
Deep Throat
LEVER
PUNCHES**

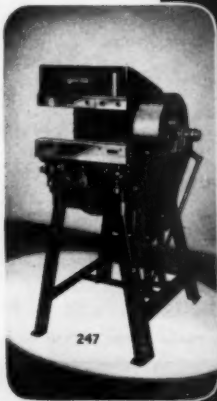
Powerful geared action develops tremendous punching power with little operator effort. Extremely versatile, suitable for a wide variety of work up to capacity. Deep throats facilitate working large sheets. Strong, all steel welded frame and stand. Capacity (all models) — $\frac{1}{8}$ " through $\frac{3}{4}$ " or $1\frac{1}{2}$ " through $\frac{1}{2}$ " mild steel... 7 $\frac{1}{2}$ tons. Auxiliary attachments available.



**SEND FOR OUR
CATALOG**



**GET ALL THE FACTS ON
THIS EXTENSIVE LINE OF
TIME AND LABOR-SAVING
TOOLS AND MACHINES**



**No. 247
18-inch
PRESS BRAKE**

Production shops turning out quantities of small forgings in large presses and job shops requiring a small brake, will find the No. 247 a cost-reducing, space-saving piece of equipment. The frame is of welded steel construction, workmanship of the highest quality. Capacity — 14 ga. mild steel over $\frac{1}{8}$ " 90° V Die or 4 $\frac{1}{2}$ tons.

WHITNEY METAL TOOL COMPANY
91 FORBES STREET • ROCKFORD, ILLINOIS

Section of
JANUARY 1951

AMERICAN ARTISAN

1951

DIRECTORY

OF WARM AIR HEATING, RESIDENTIAL AIR
CONDITIONING AND SHEET METAL PRODUCTS

Section 1.—Products Classified Page 2-D

If you want to know the names of one or more manufacturers making a certain product, look in Section 1, where products are classified alphabetically in directory style with the noun governing (for instance, Warm Air Furnaces are listed as Furnaces, Warm Air).

Section 2.—Trade Names Page 64-D

If you have the trade name of a product and want to know who manufactures it, look in Section 2, where trade names are alphabetically listed. Trade names the same as or identifiable with the company name are not listed. Manufacturers with such trade names can be readily identified under their product classification in Section 1.

Section 3.—Manufacturers' Addresses Page 86-D

For the complete name and address of any manufacturer, look in Section 3.

• The manufacturers whose names are dotted throughout the listings advertise their products in this issue. Turn to Index to Advertisers, page 104-D, for the page on which you will find the advertising of any of these manufacturers.

Section of
American Artisan
1951 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL
AIR CONDITIONING AND SHEET METAL PRODUCTS
[Section 1 — PRODUCTS CLASSIFIED]

● The manufacturers whose names are dotted throughout the listings advertise their products in this issue. Turn to Index to Advertisers, page 104-D, for the page on which you will find the advertising of any of these manufacturers.

ADSORBERS, ODOR

- Airkem, Inc., New York, N. Y.
 Carbide & Carbon Chemicals Div. Union Carbide & Carbon Corp., New York, N. Y.
 Connor Engineering Corp., W. B., New York, N. Y.
 Electroaire Corp., Long Island City, N. Y.

AIR CONDITIONING FURNACES

See Furnaces, Winter Air Conditioning

AIR CONDITIONING UNITS

CENTRAL PLANT, SUMMER

(Consisting of blower, filter, cooling coil for connection to remote compressor or cold water supply, and duct distribution of air)

- Air & Refrigeration Corp., New York, N. Y.
 American Blower Corp., Detroit, Mich.
 Auburn Burner Co., Auburn, Ind.
 Baker Ice Machine Co., South Windham, Maine.
 Buffalo Forge Co., Buffalo, N. Y.
 Bush Mfg. Co., West Hartford, Conn.
 Carrier Corp., Syracuse, N. Y.
 • Clarage Fan Co., Kalamazoo, Mich.
 Conditionaire Unit Co., Chicago, Ill.
 Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
 Drayer-Hanson, Inc., Los Angeles, Calif.
 Frigidaire Div. General Motors Corp., Dayton, Ohio.
 General Electric Co., Automatic Heating Div., Bloomfield, N. J.
 General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
 Governair Corp., Oklahoma City, Okla.
 Hastings Air Conditioning Co., Inc., Hastings, Nebr.
 Howe Ice Machine Co., Chicago, Ill.
 Ilg Electric Ventilating Co., Chicago, Ill.
 Jaden Mfg. Co., Hastings, Nebr.
 Kauffman Air Conditioning Corp., St. Louis, Mo.
 Kennard Corp., St. Louis, Mo.
 Lennox Furnace Co., Marshalltown, Iowa.
 McQuay, Inc., Minneapolis, Minn.
 Marlo Coil Co., St. Louis, Mo.
 • Meyer Furnace Co., Peoria, Ill.
 • Niagara Blower Co., New York, N. Y.
 • Premier Furnace Co., Dowagiac, Mich.
 Refrigeration Appliances, Inc., Chicago, Ill.
 Refrigeration Economics Co., Inc., Canton, Ohio.
 Rempe Co., Chicago, Ill.
 Skinner Heating & Ventilating Co., St. Louis, Mo.
 Sterling Air Conditioning Corp., Washington, D. C.
 Surface Combustion Corp., Toledo, Ohio.
 Trane Co., LaCrosse, Wis.
 U. S. Air Conditioning Corp., Minneapolis, Minn.
 Vilter Mfg. Co., Milwaukee, Wis.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Worthington Pump & Machinery Corp., Harrison, N. J.
 York Corp., York, Pa.
 Young Radiator Co., Racine, Wis.

CENTRAL PLANT, SUMMER-WINTER

(Consisting of blower, filter, humidifier, direct fired warm air furnace, cooling coil for connection to remote compressor or cold water supply, and duct distribution of air)

- Auburn Burner Co., Auburn, Ind.
 • Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
 Carrier Corp., Syracuse, N. Y.
 • Meyer Furnace Co., Peoria, Ill.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 Servel, Inc., Electric Refrigeration Div., Evansville, Ind.
 • Syncromatic Corp., Watertown, Wis.
 Viking Mfg. Corp., Cleveland, Ohio.

(Consisting of blower, filter, humidifier, steam generator, heating coil, cooling coil, and duct distribution of air)

- Air & Refrigeration Corp., New York, N. Y.
 Servel, Inc., Electric Refrigeration Div., Evansville, Ind.
 Surface Combustion Corp., Toledo, Ohio.

(Consisting of blower, filter, humidifier, reverse refrigeration cycle (heat pump), heating coil, cooling coil, and duct distribution of air)

- Air-Eau-Heat, Inc., Portland, Ore.
 Drayer-Hanson, Inc., Los Angeles, Calif.
 General Engineering & Mfg. Co., St. Louis, Mo.
 General Refrigeration Div., Beloit, Wis.
 Muncie Gear Works, Inc., Muncie, Ind.
 Northwest Heating, Inc., Portland, Ore.
 Terra-Temp Co., Inc., Indianapolis, Ind.
 Webber Engineering Corp., Indianapolis, Ind.

CENTRAL PLANT, WINTER

(Consisting of blower, filter, humidifier, heating coil for connection to remote steam or hot water boiler (split system), and duct distribution of air)

- Air & Refrigeration Corp., New York, N. Y.
 American Blower Corp., Detroit, Mich.
 Buffalo Forge Co., Buffalo, N. Y.
 Bush Mfg. Co., West Hartford, Conn.
 Carrier Corp., Syracuse, N. Y.
 Certified Furnace Co., St. Paul, Minn.
 • Clarage Fan Co., Kalamazoo, Mich.
 Drayer-Hanson, Inc., Los Angeles, Calif.
 General Electric Co., Automatic Heating Div., Bloomfield, N. J.
 Governair Corp., Oklahoma City, Okla.
 Handelan Washed Air Co., Minneapolis, Minn.
 Hastings Air Conditioning Co., Inc., Hastings, Nebr.
 Howe Ice Machine Co., Chicago, Ill.
 Jaden Mfg. Co., Inc., F., Hastings, Nebr.
 Johnson Co., S. T., Oakland, Calif., and Philadelphia, Pa.
 Kauffman Air Conditioning Corp., St. Louis, Mo.
 Kennard Corp., St. Louis, Mo.
 McQuay, Inc., Minneapolis, Minn.
 Marlo Coil Co., St. Louis, Mo.
 • Metromatic Mfg. Co., Everett, Mass.
 Morey, Dan, Los Angeles, Calif.
 New York Blower Co., Chicago, Ill.
 Niagara Blower Co., New York, N. Y.
 Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
 Refrigeration Appliances, Inc., Chicago, Ill.
 Refrigeration Economics Co., Inc., Canton, Ohio.
 Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
 Surface Combustion Corp., Toledo, Ohio.
 Trane Co., LaCrosse, Wis.
 U. S. Air Conditioning Corp., Minneapolis, Minn.
 Western Blower Co., Seattle, Wash.

● Advertisement in this issue. See Index to Advertisers, page 104-D.

Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Worthington Pump & Machinery Corp., Harrison, N. J.
 Young Radiator Co., Racine, Wis.

EVAPORATIVE TYPE, SUMMER

(Consisting of blower, filter, pump, and sprays or mists for cooling by evaporation)

- Acme Industries, Inc., Jackson, Mich.
- Air Cooling Engineering Co., Morton Grove, Ill.
- Airfan Engineering Co., Los Angeles, Calif.
- Air & Refrigeration Corp., New York, N. Y.
- Alton Mfg. Co., Dallas, Texas.
- American Blower Corp., Detroit, Mich.
- American Cooling Tower Co., Kansas City, Mo.
- April Showers Co., Inc., Washington, D. C.
- Aqua-Mist Co., Topeka, Kans.
- Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
- Barwick Mfg. Corp., Wichita, Kans.
- Belmetals Mfg. Co., Belmont, Calif.
- Beyer Oil Burner Co., Rosamond, Calif.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Carrier Corp., Syracuse, N. Y.
- Central States Mfg. Co., Inc., Arkansas City, Kans.
- Climax Machinery Co., Indianapolis, Ind.
- Comfort Products Corp., Dallas, Texas.
- Davison, Inc., Frank D., Los Angeles, Calif.
- Dearborn Stove Co., Dallas, Texas.
- Essick Mfg. Co., Los Angeles, Calif.
- Farr Co., Los Angeles, Calif.
- Goettl Bros., Phoenix, Ariz.
- Great National Air Conditioning Corp., Oklahoma City, Okla.
- International Metal Products Co., Phoenix, Ariz.
- Leisurehouse, Inc., Wichita, Kans.
- Little Giant Vaporizer Co., Oklahoma City, Okla.
- McQuay, Inc., Minneapolis, Minn.
- Montag Stove & Furnace Works, Portland, Ore.
- Morey, Dan, Los Angeles, Calif.
- Mountain States Equipment Co., Denver, Colo.
- National Engineering & Mfg. Co., Kansas City, Mo.
- Ohio Foundry & Mfg. Co., Steubenville, Ohio.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Pernot Corp., Norwalk, Calif.
- Polaire Cooler Co., Inc., Phoenix, Ariz.
- Reynolds Mfg. Co., Springfield, Mo.
- Rheem Mfg. Co., New York, N. Y.
- Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
- Sterling Air Conditioning Corp., Washington, D. C.
- Stewart Co., W. H., Oklahoma City, Okla.
- Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
- Thompson Mfg. Co., A. F., Huntington, W. Va.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Utility Appliance Corp., Los Angeles, Calif.
- Western Blower Co., Seattle, Wash.
- York Corp., York, Pa.

ROOM TYPE, FLOOR CABINET, UNDER 3 H.P. SUMMER

(Consisting of blower, filter, and cooling coil for connection to remote compressor or cold water supply)

- Airtemp Div. Chrysler Corp., Dayton, Ohio.
 - American Coils, Inc., Newark, N. J.
 - Carrier Corp., Syracuse, N. Y.
 - Frigidaire Div., General Motors Corp., Dayton, Ohio.
 - General Electric Co., Automatic Heating Div. Bloomfield, N. J.
 - Hastings Air Conditioning Co., Inc., Hastings, Nebr.
 - Ilg Electric Ventilating Co., Chicago, Ill.
 - Jaden Mfg. Co., Hastings, Nebr.
 - Kauffman Air Conditioning Corp., St. Louis, Mo.
 - Kennard Corp., St. Louis, Mo.
 - King Co., Owatonna, Minn.
 - McQuay, Inc., Minneapolis, Minn.
 - Marlo Coil Co., St. Louis, Mo.
 - Premier Furnace Co., Dowagiac, Mich.
 - Refrigeration Economics Co., Inc., Canton, Ohio.
 - Scott-Newcomb, Inc., St. Louis, Mo.
 - Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
 - Sterling Air Conditioning Corp., Washington, D. C.
 - Tenney Engineering, Inc., Newark, N. J.
 - Trane Co., La Crosse, Wis.
 - Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
 - Worthington Pump & Machinery Corp., Harrison, N. J.
 - York Corp., York, Pa.
- (Consisting of blower, filter, cooling coil, and compressor)
- Airtemp Div. Chrysler Corp., Dayton, Ohio.
 - Baltimore Porcelain Steel Corp., Baltimore, Md.
 - Carrier Corp., Syracuse, N. Y.

- General Electric Co., Automatic Heating Div. Bloomfield, N. J.
- Ilg Electric Ventilating Co., Chicago, Ill.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Pacific Mfg. Corp., Cleveland, Ohio (Window).
- Pleasantaire Corp., Washington, D. C.
- Premier Furnace Co., Dowagiac, Mich.
- Quiet-Heat Mfg. Corp., Newark, N. J.
- Remington Air Conditioning Div., Remington Corp., Cortland, N. Y.
- Scott-Newcomb, Inc., St. Louis, Mo.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
- Sterling Air Conditioning Corp., Washington, D. C.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- York Corp., York, Pa.

ROOM TYPE, FLOOR CABINET, UNDER 3 H.P. WINTER-SUMMER

(Consisting of blower, filter, humidifier, and heating and cooling coils for connection to steam or hot water supply and remote compressor or cold water supply)

- Airtemp Div. Chrysler Corp., Dayton, Ohio.
- American Coil, Inc., Newark, N. J.
- Carrier Corp., Syracuse, N. Y.
- Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
- Drayer-Hanson, Inc., Los Angeles, Calif.
- General Electric Co., Automatic Heating Div. Bloomfield, N. J.
- Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- Ilg Electric Ventilating Co., Chicago, Ill.
- Jaden Mfg. Co., Hastings, Nebr.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Kennard Corp., St. Louis, Mo.
- McQuay, Inc., Minneapolis, Minn.
- Marlo Coil Co., St. Louis, Mo.
- Pfening Co., Fred D., Columbus, Ohio.
- Refrigeration Appliances, Inc., Chicago, Ill.
- Refrigeration Economics Co., Inc., Canton, Ohio.
- Rempel Co., Chicago, Ill.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
- Sterling Air Conditioning Corp., Washington, D. C.
- Trane Co., LaCrosse, Wis.
- Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
- United States Air Conditioning Corp., Minneapolis, Minn.
- York Corp., York, Pa.
- Young Radiator Co., Racine, Wis.

ROOM TYPE, FLOOR CABINET, WINTER

(Consisting of blower, filter, humidifier, and heating coil for connection to remote boiler)

- Carrier Corp., Syracuse, N. Y.
- Drayer-Hanson, Inc., Los Angeles, Calif.
- General Electric Co., Automatic Heating Div. Bloomfield, N. J.
- Ilg Electric Ventilating Co., Chicago, Ill.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Kehm Corp., Chicago, Ill.
- Kennard Corp., St. Louis, Mo.
- Refrigeration Economics Co., Inc., Canton, Ohio.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
- Sterling Air Conditioning Corp., Washington, D. C.
- Surface Combustion Corp., Toledo, Ohio.
- Trane Co., LaCrosse, Wis.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- York Corp., York, Pa.

STORE TYPE, FLOOR CABINET, OVER 3 H.P. SUMMER

(Consisting of blower, filter, cooling coil, and compressor, with air discharge approximately 6 ft above floor)

- Airtemp Div. Chrysler Corp., Dayton, Ohio.
- Alton Mfg. Co., Dallas, Texas.
- Automatic Firing Corp., St. Louis, Mo.
- Baker Ice Machine Co., Inc., South Windham, Maine.
- Bard Mfg. Co., Bryan, Ohio.
- Brunner Mfg. Co., Utica, N. Y.
- Carrier Corp., Syracuse, N. Y.
- Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
- Frick Co., Waynesboro, Pa.
- Frigidaire Div., General Motors Corp., Dayton, Ohio.
- General Electric Co., Automatic Heating Div. Bloomfield, N. J.
- General Engineering & Mfg. Co., St. Louis, Mo.
- General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
- Governair Corp., Oklahoma City, Okla.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Nat Corp., Kansas City, Mo.
- Nevinger Manufacturing Co., Inc., Greenville, Ill.
- Refrigeration Appliances, Inc., Chicago, Ill.
- Scott-Newcomb, Inc., St. Louis, Mo.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Trane Co., LaCrosse, Wis.
 Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
 U. S. Air Conditioning Corp., Minneapolis, Minn.
 Viking Mfg. Corp., Cleveland, Ohio.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Worthington Pump & Machinery Corp., Harrison, N. J.
 York Corp., York, Pa.
 York-Shipley, Inc., York, Pa.

AIR DIFFUSERS

See Diffusers, Air

AIR FILTERS

See Filters, Air

AIR METERS

See Meters, Air Velocity, Direct Reading; Anemometers

AIR WASHERS

See Washers, Air

ANALYZERS, CO₂, PORTABLE

- Bacharach Industrial Instrument Co., Pittsburgh, Pa.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Dwyer Mfg. Co., F. W., Chicago, Ill.
- Ellison Draft Gage Co., Chicago, Ill.
- Engelhard, Inc., Chas., East Newark, N. J.
- General Scientific Equipment Co., Philadelphia, Pa.
- Hays Corp., Michigan City, Ind.
- Huyette Co., Inc., Paul B., Philadelphia, Pa.
- Permutit Co., New York, N. Y.
- Preferred Utilities Mfg. Corp., New York, N. Y.
- Uehling Instrument Co., Paterson, N. J.

ANEMOMETERS

Detroit Air Conditioning Service Co., Detroit, Mich.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
 Hastings Instrument Co., Inc., Hampton, Va.
 Illinois Testing Laboratories, Inc., Chicago, Ill. (Thermo-electric)
 Taylor Instrument Cos., Rochester, N. Y.
 Wilson Products, Inc., Reading, Pa. (Thermometer type)

ANGLES, BARS, BEAMS, CHANNELS AND TEES (LIGHT WEIGHT SHAPES)

- Alden Mfg. Co., Painesville, Ohio.
- Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel).
- Aluminum Co., of America, Pittsburgh, Pa.
- American Brass Co., Waterbury, Conn.
- Bethlehem Steel Co., Bethlehem, Pa.
- Dyers Co., A. M., Pittsburgh, Pa. (Wrought iron structural shapes)
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Dahlstrom Metallic Door Co., Jamestown, N. Y. (Angles, Channels).
- Decatur Iron & Steel Co., Decatur, Ala.
- Dow Chemical Co., Midland, Mich.
- Harvey Machine Co., Inc., Torrance, Calif.
- Inland Steel Co., Chicago, Ill.
- Inland Steel Products Co., Milwaukee, Wis.
- International Steel Co., Evansville, Ind.
- Jones & Laughlin Steel Corp., Pittsburgh, Pa.
- Kawneer Co., Niles, Mich.
- Laclede Steel Co., St. Louis, Mo. (Bars)
- Penn Metal Co., Inc., New York, N. Y. (Channels)
- Republic Steel Corp., Cleveland, Ohio.
- Revere Copper & Brass Inc., New York, N. Y.
- S. O. S. Products Co., Inc., Brooklyn, N. Y.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- Truscon Steel Co., Youngstown, Ohio.
- United States Steel Co., Pittsburgh, Pa.
- Weirton Steel Co., Weirton, W. Va.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.

ASBESTOS BOARD

See Sheets, Non-Metallic

ASBESTOS PAPER

See Paper, Asbestos

ATTIC FANS

See Fans, Night Air Cooling

AUTOMATIC HUMIDIFIERS

See Humidifiers, Furnace

AWNINGS, SHEET METAL

Kawneer Co., Niles, Mich.
 KoolVent Metal Awning Corp. of America, Pittsburgh, Pa. (Aluminum)
 Russell Co., F. C., Cleveland, Ohio.
 Wagner Awning & Mfg. Co., Cleveland, Ohio.

BAFFLES, COMBUSTION CHAMBER, OIL BURNER AND STOKER

- Amerform Corp., Philadelphia, Pa.
- Barclay Co., Robt., Chicago, Ill.
- Boston Machine Works Co., Lynn, Mass.
- Chicago Fire Brick Co., Chicago, Ill.
- Frankland Corp., Ferndale, Mich.
- Harvey, Inc., Sid. Valley Stream, N. Y.
- Insulation & Refractories Co., Williamson, N. Y.
- Laclede-Christy Co., St. Louis, Mo.
- Monogram Products Co., Inc., Philadelphia, Pa.
- Munn & Steele, Inc., Newark, N. J. (Stoker).
- Oil Equipment Mfg. Co., New Haven, Conn.
- Peterson Co., B. A., Dowagiac, Mich.
- Quigley Co., Inc., New York, N. Y.
- Refractory & Insulation Corp., New York, N. Y.
- Robinson Insulation Co., Great Falls, Mont.
- S. O. S. Products Co., Inc., Brooklyn, N. Y.
- Stark & Co., H. W., Ann Arbor, Mich.
- Walsh Refractories Corp., St. Louis, Mo.

BAGS, DUST RECOVERY

Burcott Mills, Chicago, Ill.
 Day Co., Minneapolis, Minn.
 Raybestos-Manhattan, Inc., Manheim, Pa.
 Wagner Awning & Mfg. Co., Cleveland, Ohio.

BALANCING EQUIPMENT, FAN

- Bear Mfg. Co., Rock Island, Ill.
- Gisholt Machine Co., Madison, Wis.
- Sundstrand Machine Tool Co., Rockford, Ill.

BAND SAWS

See Machines, Saws, Band

BAR FOLDERS

See Machines, Bar Folding

BAROMETRIC DRAFT DAMPERS

See Dampers, Draft, Barometric; Draft Diverters

BARS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BASES AND PADS, VIBRATION ISOLATING

- Buffalo Forge Co., Buffalo, N. Y.
- Clarage Fan Co., Kalamazoo, Mich.
- Cork Import Corp., Englewood, N. J.
- Cork Insulation Co., Inc., New York, N. Y.
- Ehret Magnesia Mfg. Co., Valley Forge, Pa.
- Felters Co., Inc., Boston, Mass.
- Firestone Tire & Rubber Co., Akron, Ohio.
- Goodrich Co., B. F., Akron, Ohio.
- Hobsite Products Co., Inc., Paterson, N. J.
- Johns-Manville, New York, N. Y.
- Korfund Co., Inc., Long Island City, N. Y.
- Lord Mfg. Co., Erie, Pa.
- MB Mfg. Co., Inc., New Haven, Conn.
- Mundet Cork Corp., Brooklyn, N. Y.
- National Lead Co., New York, N. Y.
- Raybestos-Manhattan, Inc., Passaic, N. J.
- Rockwood Mfg. Co., Inc., Indianapolis, Ind.
- Sponge Rubber Products Co., Shelton, Conn.
- United Cork Cos., Kearny, N. J.
- United States Rubber Co., New York, N. Y.
- Vibrashock Div., Robinson Aviation, Inc., Teterboro, N. J.
- Vibration Eliminator Co., Long Island City, N. Y.
- Wagner Awning & Mfg. Co., Cleveland, Ohio.
- Western Felt Works, Chicago, Ill. (Felt).

BATHS, TINNING

Craftsman Plating & Tinning Co., Chicago, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Division Lead Co., Chicago, Ill.
Eclipse Fuel Engineering Co., Rockford, Ill.
Farrelly Co., Philadelphia, Pa.

BEADERS

See Machines, Beading

BEAMS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BEARINGS, PILLOW BLOCK

- Ahlberg Bearing Co., Chicago, Ill.
- Air Controls, Inc., Cleveland, Ohio.
- Anti-Friction Bearings Co., Los Angeles, Calif.
- Chain Belt Co., Milwaukee, Wis.
- Chicago Die Casting Co., Chicago, Ill.
- Congress Drives Div., Tann Corp., Detroit, Mich.
- Dick Co., Inc., R. & J., Passaic, N. J.
- Dodge Mfg. Corp., Mishawaka, Ind.
- Fafnir Bearing Co., New Britain, Conn.
- Freed Products Co., Moline, Ill.
- Golden's Foundry & Machine Co., Columbus, Ga.
- Ideal Products Co., Oshkosh, Wis.
- Jones Foundry & Machine Co., W. A., Chicago, Ill.
- Lau Blower Co., Dayton, Ohio.
- Link-Belt Co., Chicago, Ill.
- Norma-Hoffmann Bearing Corp., Stamford, Conn.
- Plymouth Industries, Inc., Plymouth, Ind.
- Randall Graphite Bearings, Inc., Chicago, Ill.
- Royersford Foundry & Machine Co., Royersford, Pa.
- Seco-Lite Mfg. Co., St. Louis, Mo.
- Shafer Bearing Corp., Downers Grove, Ill.
- SKF Industries, Inc., Philadelphia, Pa.
- Standard Pressed Steel Co., Jenkintown, Pa.
- Stephens-Adamson Mfg. Co., Aurora, Ill.
- Timken Roller Bearing Co., Canton, Ohio.
- Triangle Mfg. Co., Oshkosh, Wis.
- Western Thermal Equipment Co., Los Angeles, Calif.
- Whiteley Bearing Corp., Chicago, Ill.
- Wood's Sons Co., T. B., Chambersburg, Pa.

BELTS, V

- Allis-Chalmers Mfg. Co., Milwaukee, Wis.
- American Pulley Co., Philadelphia, Pa.
- Browning Mfg. Co., Inc., Mayville, Ky.
- Chicago Belting Co., Chicago, Ill.
- Congress Drives Div., Tann Corp., Detroit, Mich.
- Dayton Rubber Co., Dayton, Ohio.
- Dick Co., Inc., R. & J., Passaic, N. J.
- Dodge Mfg. Corp., Mishawaka, Ind.
- Firestone Tire & Rubber Co., Akron, Ohio.
- Gates Rubber Co., Inc., Denver, Colo.
- Gilmer Co., L. H., Div. United States Rubber Co., Philadelphia, Pa.
- Goodrich Co., B. F., Akron, Ohio.
- Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
- Jones Foundry & Machine Co., W. A., Chicago, Ill.
- Lovejoy Flexible Coupling Co., Chicago, Ill.
- Manheim Mfg. & Belting Co., Manheim, Pa. (Adjustable).
- Maurey Mfg. Corp., Chicago, Ill.
- Pyott Foundry & Machine Co., Chicago, Ill.
- Raybestos-Manhattan, Inc., Passaic, N. J.
- Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown, Ohio.
- Rockwood Mfg. Co., Inc., Indianapolis, Ind.
- Thermoid Co., Trenton, N. J.
- United States Rubber Co., New York, N. Y.
- Wood's Sons Co., T. B., Chambersburg, Pa.
- Worthington Pump & Machinery Corp., Harrison, N. J.

BLADES, PROPELLER FAN

- Ackermann Mfg. Co., Wheeling, W. Va.
- Aerovent Fan Co., Piqua, Ohio.
- Air Controls, Inc., Cleveland, Ohio.
- Airmaster Corp., Chicago, Ill.
- Beckett & Co., Thomas, Dallas, Texas.
- Bern's Mfg. Co., Chicago, Ill.
- Burden Co., Alan E., Hollywood, Calif.
- C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
- Champion Blower & Forge Co., Lancaster, Pa.
- Chelsea Fan & Blower Co., Inc., Irvington, N. J.
- Chicago Blower Corp., Chicago, Ill.
- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Dallas Engineering Co., Inc., Dallas, Texas.
- DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
- Dual-Air Fan Corp., South Elgin, Ill.

- Dynamic Air Engineering, Inc., Los Angeles, Calif.
- Electrovent Fan & Mfg. Co., Chicago, Ill.
- Goettl Bros., Phoenix, Ariz.
- International Engineering, Inc., Dayton, Ohio.
- Joy Mfg. Co., Pittsburgh, Pa.
- Kloppenberg Aluminum Foundry, Davenport, Iowa.
- Lakewood Engineering & Mfg. Co., Chicago, Ill.
- Martin Fan & Blower Co., Chicago, Ill.
- Meier Electric & Machine Co., Indianapolis, Ind.
- Myers Electric Co., Pittsburgh, Pa.
- National Gas Equipment Co., Inc., Terrell, Texas.
- Peerless Electric Co., Warren, Ohio.
- Roto-Beam Div., Peerless of America, Chicago, Ill.
- South Bend Air Products, Inc., South Bend, Ind.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Swift Mfg. Co., Hazel Park, Mich.
- Thermal Industries, Inc., Calif.
- Torrington Mfg. Co., Torrington, Conn.
- Utility Appliance Corp., Los Angeles, Calif.

BLAST GATES

- Berger Bros. Co., Philadelphia, Pa.
- Buffalo Forge Co., Buffalo, N. Y.
- Champion Blower & Forge Co., Lancaster, Pa.
- Clavage Fan Co., Kalamazoo, Mich.
- Day Co., Minneapolis, Minn.
- Eclipse Fuel Engineering Co., Rockford, Ill.
- Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
- Kirk & Blum Mfg. Co., Cincinnati, Ohio.
- Maysteel Products, Inc., Milwaukee, Wis.
- Newcomb-Detroit Co., Detroit, Mich.
- Publ & Hepper Mfg. Co., Inc., St. Louis, Mo.
- R-S Products Corp., Philadelphia, Pa.
- Rees Blow Pipe Mfg. Co., Inc., San Francisco, Calif.
- Skinner Heating & Ventilating Co., St. Louis, Mo.
- Spencer Turbine Co., Hartford, Conn.
- Western Blower Co., Seattle, Wash.
- Winkler & Sons, Inc., A. E., Milwaukee, Wis.

BLOW PIPE EQUIPMENT

See Blast Gates; Collectors, Blow Pipe; Fittings and Accessories, Blow Pipe

BLOWER CONTROLS

See Controls

BLOWER-FILTER UNITS, WARM AIR FURNACE

(Equipped with filter)

- Agricola Furnace Co., Inc., Gadsden, Ala.
- Air Conditioning Equipment Co., Minneapolis, Minn.
- Air Controls, Inc., Cleveland, Ohio.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Airwasher Corp., Eaton Rapids, Mich.
- Aladdin Heating Corp., Oakland, Calif.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Machine Products Co., Marshalltown, Iowa.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Armstrong Furnace Co., Columbus, Ohio.
- Auburn Burner Co., Auburn, Ind.
- Bard Mfg. Co., Bryan, Ohio.
- Bovee Furnace Works, Waterloo, Iowa.
- Brundage Co., Kalamazoo, Mich.
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Campbell Heating Co., Des Moines, Iowa.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Dana Fan & Blower Corp., Cincinnati, Ohio.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Furblo Co., Hermansville, Mich.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Harvey-Whipple, Inc., Springfield, Mass.
- Hastings Air Conditioning Co., Hastings, Nebr.
- Heating Assurance, Inc., Spokane, Wash.
- Henry Furnace Co., Medina, Ohio.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- International Oil Burner Co., St. Louis, Mo.
- International Sales Co., San Francisco, Calif.
- Jackson & Church Co., Saginaw, Mich.
- Jaden Mfg. Co., Inc., F., Hastings, Nebr.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kelsey Heating Co., Syracuse, N. Y.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Kortz Blower Mfg. Co., Grand Rapids, Mich.
- Lau Blower Co., Dayton, Ohio.
- Lennox Furnace Co., Marshalltown, Iowa.
- MaGirl Foundry & Furnace Co., Bloomington, Ill.
- Majestic Co., Huntington, Ind.
- Marshall Furnace Co., Marshall, Mich.
- Martin Fan & Blower Co., Chicago, Ill.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Peerless Electric Co., Warren, Ohio.
- Peerless Foundry Co., Indianapolis, Ind.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Premier Furnace Co., Dowagiac, Mich.
- Propaire Mfg. Co., Genoa, Ill.
- Round Oak Co., Inc., of Ind., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, Ohio.
- St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Sandberg Mfg. Co., Portland, Ore.
- Security Mfg. Co., Kansas City, Mo.
- Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Utility Appliance Corp., Los Angeles, Calif.
- Viking Air Conditioning Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Western Blower Co., Seattle, Wash.
- Williamson Heater Co., Cincinnati, Ohio.
- Zick Sheet Metal Works, Dearborn, Mich.

(Equipped with humidifier and/or germicidal apparatus)

- Brundage Co., Kalamazoo, Mich.
- National Air Conditioning Inc., Johnstown, Pa.

BLOWER HOUSINGS

See Housings, Blower and Fan

BLOWER-WASHER UNITS, WARM AIR FURNACE

- Air Stream Filter Corp., St. Louis, Mo.
- Airwasher Corp., Eaton Rapids, Mich.
- American Machine Products Co., Marshalltown, Iowa.
- Bishop & Babcock Mfg. Co., Cleveland, Ohio.
- Furblo Co., Hermansville, Mich.
- Hess Warming & Ventilating Co., Chicago, Ill.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- National Engineering & Mfg. Co., Kansas City, Mo.
- New York Blower Co., Chicago, Ill.

BLOWER WHEELS

See Wheels, Blower

BLOWERS

Forced Draft, Ash Pit

- American Blower Corp., Detroit, Mich.
- Babbin, Inc., New York, N. Y.
- Buffalo Forge Co., Buffalo, N. Y.
- Champion Blower & Forge Co., Lancaster, Pa.
- Champion Products Co., Muskegon, Mich.
- Clarage Fan Co., Kalamazoo, Mich.
- Fasco Industries, Inc., Rochester, N. Y.
- Garden City Fan Co., Chicago, Ill.
- General Blower Co., Morton Grove, Ill.
- General Blower Co., Inc., Philadelphia, Pa.
- International Engineering, Inc., Dayton, Ohio.
- Kortz Blower Mfg. Co., Grand Rapids, Mich.
- Lehigh Fan & Blower Co., Allentown, Pa.
- Martin Fan & Blower Co., Chicago, Ill.
- Nelson Herman, Div. American Air Filter Co., Moline, Ill.
- New York Blower Co., Chicago, Ill.
- Propaire Mfg. Co., Genoa, Ill.
- South Bend Air Products, Inc., South Bend, Ind.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Wing Mfg. Co., L. J., New York, N. Y.

Furnace, Centrifugal

- Agricola Furnace Co., Inc., Gadsden, Ala.
- Air Conditioning Equipment Co., Minneapolis, Minn.
- Air Controls, Inc., Cleveland, Ohio.
- Airecon Industries, Detroit, Mich.
- Airfan Engineering Co., Los Angeles, Calif.
- Aladdin Heating Corp., Oakland, Calif.
- American Blower Corp., Detroit, Mich.
- American Foundry & Furnace Co., Bloomington, Ill.

- American Furnace Co., St. Louis, Mo.
- American Machine Products Co., Marshalltown, Iowa.
- Auburn Burner Co., Auburn, Ind.
- Bishop & Babcock Mfg. Co., Cleveland, Ohio.
- Brundage Co., Kalamazoo, Mich.
- Buffalo Forge Co., Buffalo, N. Y.
- Campbell Heating Co., Des Moines, Iowa.
- Century Fan & Ventilator Co., Stamford, Conn.
- Champion Blower & Forge Co., Lancaster, Pa.
- Chicago Blower Corp., Chicago, Ill.
- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Clarage Fan Co., Kalamazoo, Mich.
- Eclipse Fuel Engineering Co., Rockford, Ill.
- Freed Products Co., Moline, Ill.
- Furblo Co., Hermansville, Mich.
- General Blower Co., Morton Grove, Ill.
- General Blower Co., Inc., Philadelphia, Pa.
- Goettl Bros., Phoenix, Ariz.
- Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- International Sales Co., San Francisco, Calif.
- Jaden Mfg. Co., Hastings, Nebr.
- Kortz Blower Mfg. Co., Grand Rapids, Mich.
- Lau Blower Co., Dayton, Ohio.
- Lennox Furnace Co., Marshalltown, Iowa.
- MaGirl Foundry & Furnace Co., Bloomington, Ill.
- Majestic Co., Huntington, Ind.
- Martin Fan & Blower Co., Chicago, Ill.
- Mauer Engineering, Evanston, Ill.
- Meyer Furnace Co., Peoria, Ill.
- Montag Stove & Furnace Works, Portland, Ore.
- Morrison Products, Inc., Cleveland, Ohio.
- Mountain States Equipment Co., Denver, Colo.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- New York Blower Co., Chicago, Ill.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Peerless Electric Co., Warren, Ohio.
- Premier Furnace Co., Dowagiac, Mich.
- Schwitzer-Cummins Co., Indianapolis, Ind.
- Security Mfg. Co., Kansas City, Mo.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Standard Heating Equipment Co., Waterloo, Iowa.
- Trade-Wind Motors, Inc., Los Angeles, Calif.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Utility Appliance Corp., Los Angeles, Calif.
- Viking Air Conditioning Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Western Blower Co., Seattle, Wash.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Zick Sheet Metal Works, Dearborn, Mich.

Induced Draft, Smoke Pipe

- Aladdin Heating Corp., Oakland, Calif. (Industrial)
- American Foundry & Furnace Co., Bloomington, Ill.
- Autogas Co., Chicago, Ill.
- Babbin, Inc., New York, N. Y.
- Chicago Blower Corp., Chicago, Ill.
- DeBothezat Fans Div. American Machine & Metals, Inc., Moline, Ill.
- Garden City Fan Co., Chicago, Ill.
- General Blower Co., Morton Grove, Ill.
- Kortz Blower Mfg. Co., Grand Rapids, Mich.
- Little Burner Co., Inc., H. C., San Rafael, Calif.
- Martin Fan & Blower Co., Chicago, Ill.
- Nelson, Herman, Div. American Air Filter Co., Moline, Ill.
- New York Blower Co., Chicago, Ill.
- Perfection Stove Co., Cleveland, Ohio.
- Propaire Mfg. Co., Genoa, Ill.
- Queen Stove Works, Inc., Albert Lea, Minn.
- Viking Mfg. Corp., Cleveland, Ohio.
- Wing Mfg. Co., L. J., New York, N. Y.

Ventilating System (Capacity 4,000 cfm up)

- Air Controls, Inc., Cleveland, Ohio.
- Airfan Engineering Co., Los Angeles, Calif.
- Aladdin Heating Corp., Oakland, Calif.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Machine Products Co., Marshalltown, Iowa.
- Babbin, Inc., New York, N. Y.
- Bayley Blower Co., Milwaukee, Wis.
- Berns Mfg. Co., Chicago, Ill.
- Bishop & Babcock Mfg. Co., Cleveland, Ohio.
- Brundage Co., Kalamazoo, Mich.
- Buffalo Forge Co., Buffalo, N. Y.
- Campbell Heating Co., Des Moines, Iowa.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Century Fan & Ventilator Co., Stamford, Conn.
- Champion Blower & Forge Co., Lancaster, Pa.
- Chicago Blower Corp., Chicago, Ill.
- Chicago Fan & Fin Coil Co., Chicago, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Clarage Fan Co., Kalamazoo, Mich.
- Commercialaire, Inc., Brooklyn, N. Y.
- Coppus Engineering Corp., Worcester, Mass.
- Day Co., Minneapolis, Minn.
- DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
- Electrovent Fan & Mfg. Co., Chicago, Ill.
- Fried Air-Kool Co., Detroit, Mich. (Cast Aluminum)
- Furblo Co., Hermansville, Mich.
- Garden City Fan Co., Chicago, Ill.
- General Blower Co., Morton Grove, Ill.
- General Blower Co., Inc., Philadelphia, Pa.
- Hartwell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
- Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- Ilg Electric Ventilating Co., Chicago, Ill.
- International Engineering, Inc., Dayton, Ohio.
- International Sales Co., San Francisco, Calif.
- Jaden Mfg. Co., Inc., F. Hastings, Nebr.
- Johnson Fan & Blower Corp., Chicago, Ill.
- Kortz Blower Mfg. Co., Grand Rapids, Mich.
- Lau Blower Co., Dayton, Ohio.
- Lehigh Fan & Blower Co., Allentown, Pa.
- McGill Foundry & Furnace Co., Bloomington, Ill.
- Martin Fan & Blower Co., Chicago, Ill.
- Montag Stove & Furnace Works, Portland, Ore.
- Mountain States Equipment Co., Denver, Colo.
- National Engineering & Mfg. Co., Kansas City, Mo.
- Nelson, Herman, Div. American Air Filter Co., Moline, Ill.
- Newcomb-Detroit Co., Detroit, Mich.
- New York Blower Co., Chicago, Ill.
- Niagara Blower Co., New York, N. Y.
- Northern Blower Co., Cleveland, Ohio.
- Peerless Electric Co., Warren, Ohio.
- Phelps Mfg. Co., Little Rock, Ark.
- Properaire Mfg. Co., Genoa, Ill.
- Schwitzer-Cummins Co., Indianapolis, Ind.
- Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., St. Louis, Mo.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Trane Co., LaCrosse, Wis.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Utility Appliance Corp., Los Angeles, Calif.
- Western Blower Co., Seattle, Wash.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Wing Mfg. Co., L. J., New York, N. Y.

BLOWING MACHINES, INSULATION

- General Blower Co., Morton Grove, Ill.
- Insulating Equipment Co., Chicago, Ill.
- Rotary Compressor Blower Co., Grove City, Pa.
- Superior Mfg. Co., Alexandria, Ind.

BOLTS, EXPANSION

- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Chicago Expansion Bolt Co., Chicago, Ill.
- Diamond Expansion Bolt Co., Inc., Garwood, N. J.
- Fee & Mason Mfg. Co., Inc., Manassas, N. J.
- Industrial Screw Co., Chicago, Ill.
- National Lead Co., New York, N. Y.
- Paine Co., Chicago, Ill.
- Phillips Drill Co., Chicago, Ill.
- Rawlplug Co., Inc., New York, N. Y.
- South Chester Corp., Philadelphia, Pa.
- Star Expansion Bolt Co., New York, N. Y.
- U. S. Expansion Bolt Co., Inc., York, Pa.

BOLTS, TOGGLE AND ANCHOR

- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Chicago Expansion Bolt Co., Chicago, Ill.
- Diamond Expansion Bolt Co., Inc., Garwood, N. J.
- Fee & Mason Mfg. Co., Inc., Manassas, N. J.
- Huck Mfg. Co., Detroit, Mich.
- Industrial Screw Co., Chicago, Ill.
- Paine Co., Chicago, Ill.
- Rawlplug Co., Inc., New York, N. Y.
- Star Expansion Bolt Co., New York, N. Y.
- U. S. Expansion Bolt Co., Inc., York, Pa.

BOMBS, SMOKE

- Hill & Co., E. Vernon, Chicago, Ill. (Also guns)
- Kilgore Mfg. Co., Westerville, Ohio.
- Pains Fireworks Display Co., Inc., New York, N. Y.
- Unexcelled Chemical Corp., New York, N. Y.

BOOSTER FANS

See Fans, Booster

BRUSHES, ACID

- Allen Co., Inc., L. B., Chicago, Ill.
- Brushes & Brooms Co., New York, N. Y.
- Division Lead Co., Chicago, Ill.
- Farrelloy Co., Philadelphia, Pa.
- Lukens Metal Co., Thos. F., Philadelphia, Pa.
- Milwaukee Brush Mfg. Co., Milwaukee, Wis.
- Osborn Mfg. Co., Cleveland, Ohio.
- Potomac Mfg. Co., Philadelphia, Pa.
- Schaefer Brush Mfg. Co., Milwaukee, Wis. (Rustproof).
- Weiss & Co., H., New York, N. Y.

BRUSHES, FURNACE

- Brushes & Brooms Co., New York, N. Y.
- Flour City Brush Co., Minneapolis, Minn.
- Milwaukee Brush Mfg. Co., Milwaukee, Wis.
- Osborn Mfg. Co., Cleveland, Ohio.
- Schaefer Brush Mfg. Co., Milwaukee, Wis.
- Worcester Brush & Scraper Co., Div. Mason Worcester Co., Worcester, Mass.

BUFFERS, GRINDERS, POLISHERS, AND SANDERS

Electric

- Albertson & Co., Inc., Sioux City, Iowa.
- Baldor Electric Co., St. Louis, Mo.
- Black & Decker Mfg. Co., Towson, Md.
- Brown-Brockmeyer Co., Inc., Dayton, Ohio.
- Chicago Pneumatic Tool Co., New York, N. Y.
- DeSoto Oil Burner Corp., York, Pa.
- DoAll Co., Des Plaines, Ill.
- H & H Research Co., Detroit, Mich.
- Hammond Machinery Builders, Inc., Kalamazoo, Mich.
- Haskins Co., R. G., Chicago, Ill. (Flexible shaft)
- Hobart Bros. Co., Troy, Ohio.
- Independent Pneumatic Tool Co., Aurora, Ill.
- Jefferson Machine Tool Co., Cincinnati, Ohio.
- Lee Co., K. O. Aberdeen, S. D.
- L'Hommedieu & Sons Co., Chas. F., Chicago, Ill.
- Mall Tool Co., Chicago, Ill.
- Marathon Electric Mfg. Corp., Wausau, Wis.
- Millers Falls Co., Greenfield, Mass.
- Minnesota Mining & Mfg. Co., St. Paul, Minn.
- Miscner Mfg. Co., Inc., Syracuse, N. Y.
- Portable Electric Tools, Inc., Chicago, Ill.
- Reynolds Electric Co., River Grove, Ill.
- Rotor Tool Co., Cleveland, Ohio. (Portable).
- Skilsaw, Inc., Chicago, Ill.
- Small Motors, Inc., Chicago, Ill.
- Snap-on Tools Corp., Kenosha, Wis.
- Speedway Mfg. Co., Cicero, Ill.
- Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
- Stow Mfg. Co., Binghamton, N. Y. (Flexible shaft)
- Syntro Co., Homer City, Pa.
- United States Electrical Tool Co., Cincinnati, Ohio.
- U. S. Electrical Motors, Inc., Los Angeles, Calif. (Buffers)
- Valley Electric Co., St. Louis, Mo.
- Van Dorn Electric Tool Co., Towson, Md.
- Wyzenbeek & Staff, Inc., Chicago, Ill.
- York Electric & Machine Co., York, Pa.

Pneumatic

- Buckeye Tools Corp., Dayton, Ohio.
- Chicago Pneumatic Tool Co., New York, N. Y. (Grinders)
- Ideal Commutator Dresser Co., Sycamore, Ill.
- Independent Pneumatic Tool Co., Aurora, Ill.
- Keller Tool Co., Grand Haven, Mich.
- Rotor Tool Co., Cleveland, Ohio. (Portable)
- Skilsaw, Inc., Chicago, Ill.
- Sunstrand Machine Tool Co., Rockford, Ill.

BURNERS, CONVERSION, RESIDENTIAL

Gas

- Adams Mfg. Co., Cleveland, Ohio.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Furnace Co., St. Louis, Mo.
- American Gas Burner, Inc., Indianapolis, Ind.
- American Heating & Engineering Co., New Albany, Ind.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Burner Co., Oklahoma City, Okla.
- Anchor Div., Stratton & Terstege Co., New Albany, Ind.
- Armstrong Furnace Co., Columbus, Ohio; Des Moines, Iowa.
- Aston Products, Inc., Detroit, Mich.
- Auburn Burner Co., Auburn, Ind.
- Autogas Co., Chicago, Ill.
- Automatic Firing Corp., St. Louis, Mo.
- Automatic Furnace Co., Lansing, Mich.
- Automatic Gas Equipment Co., Pittsburgh, Pa.
- B. G. B. Mfg. Co., Dearborn, Mich.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Banner Burner Co., Youngstown, Ohio.
 - Barber Gas Burner Co., Cleveland, Ohio.
 - Bard Mfg. Co., Bryan, Ohio.
 - Barton Co., Minneapolis, Minn.
 - Beck Engineering Combustion Company, St. Louis, Mo.
 - Berger Furnace Mfg. Co., Pittsburgh, Pa.
 - Bowliby Air Devices Co., Wichita, Kans.
 - Brown Hart Engineering Corp., Hazel Park, Mich.
 - Bryant Corp., C. L., Cleveland, Ohio.
 - Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
 - Budco, Inc., Detroit, Mich.
 - Burdett Mfg. Co., Chicago, Ill.
 - Calesco Corp., Lynn, Mass.
 - Central States Mfg. Co., Inc., Arkansas City, Kans.
 - Century Engineering Corp., Cedar Rapids, Iowa.
 - Ceramic Products Mfg. Co., Milwaukee, Wis.
 - Certified Furnace Co., St. Paul, Minn.
 - Columbia Burner Co., Toledo, Ohio.
 - Conco Engineering Works, Mendota, Ill.
 - Consolidated Industries, Inc., Lafayette, Ind.
 - Crane Co., Chicago, Ill.
 - Dalzen Tool & Mfg. Co., Detroit, Mich.
 - Delco Appliance Div. General Motors Corp., Rochester, N. Y.
 - Denver Fire Clay Co., Denver, Colo.
 - Detroit Universal Products, Detroit, Mich.
 - Dornback Furnace & Foundry Co., Cleveland, Ohio.
 - Dunn-Rite Products, Garden City, Mich.
 - Eclipse Fuel Engineering Co., Rockford, Ill.
 - Econom Gas Products Co., Detroit, Mich.
 - Even-Air Mfg. & Sales Co., Detroit, Mich.
 - F & E Mfg. Co., Centerville, Calif.
 - Fairbanks, Morse & Co., Chicago, Ill.
 - Famous Furnace Co., Cleveland, Ohio.
 - Finn Engineers, Inc., Jerry, St. Paul, Minn.
 - Firewell Co., Inc., Buffalo, N. Y.
 - Floral City Heater Co., Monroe, Mich.
 - Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
 - Gasco Industries, Inc., Detroit, Mich.
 - Geisel Mfg. Inc., Elyria, Ohio.
 - General Automatic Products Corp., Baltimore, Md.
 - Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
 - Goodfriend Pib. & Htg. Burner Sales, Detroit, Mich.
 - Gregory Co., J. G., Chicago, Ill.
 - H-P Products, Louisville, Ohio.
 - Handley-Brown Heater Co., Jackson, Mich.
 - Hansen Electric Co., San Francisco, Calif.
 - Harvey-Whipple, Inc., Springfield, Mass.
 - Heatcraft Co., Louisville, Ky.
 - Hook & Ackerman, Inc., New York, N. Y.
 - Hook & Miller, Pittsburgh, Pa.
 - Horsman-Markin Corp., Detroit, Mich.
 - Hutchinson Burner & Mfg. Co., Hutchinson, Kans.
 - Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
 - Iron Fireman Mfg. Co., Cleveland, Ohio.
 - Jackson & Church Co., Saginaw, Mich.
 - Jackson Gas Burner Corp., Detroit, Mich.
 - Johnson Gas Appliance Co., Cedar Rapids, Iowa.
 - Junior Co., J. C., Kansas City, Mo.
 - Ken-Joy Gas Burner Co., Milwaukee, Wis.
 - Killam Gas Burner Co., Denver, Colo.
 - Kindl-Aire Corp., Cleveland, Ohio.
 - Kleenair Furnace Co., Portland, Ore.
 - Ko-Z-Aire, Inc., Red Oak, Iowa.
 - Liberty Combustion Corp., Syracuse, N. Y.
 - Lientz Co., B. P., Kansas City, Mo.
 - Lundt, Inc., Ernest C., Little Falls, N. J.
 - McDaniel Mfg. Co., Inc., Dallas, Texas.
 - Magic Servant Products Co., Detroit, Mich.
 - Martin Co., Inc., J. O., San Francisco, Calif.
 - Maxwell Inc., Denver, Colo.
 - Mayflower Air Conditioners, Inc., St. Paul, Minn.
 - Meyer Furnace Co., Peoria, Ill.
 - Mid-Continent Metal Products Co., Chicago, Ill.
 - Miller-Special Gas Heating Co., Chicago, Ill.
 - Modern Controls Corp., Detroit, Mich.
 - Monad Products Co., Dearborn, Mich.
 - Moncrief Furnace & Mfg. Co., Dallas, Texas.
 - Moore Equipment Co., Lincoln, Neb.
 - Morrison Steel Products, Inc., Buffalo, N. Y.
 - Mueller Furnace Co., L. J., Milwaukee, Wis.
 - Multi-Therm Mfg. Co., Inc., Detroit, Mich.
 - Muncie Burner Mfg. Co., Romulus, Mich.
 - National Engineering & Mfg. Co., Kansas City, Mo.
 - National Stoker Co., St. Louis, Mo.
 - Niagara Motors Corp., Dunkirk, N. Y.
 - Norge Heat Div. Borg-Warner Corp., Detroit, Mich.
 - Norman Products Co., Inc., Columbus, Ohio.
 - Olmstead & Co., Chas. M., Detroit, Mich.
 - Paramount Supply Co., Lincoln, Neb.
 - Pennsylvania Furnace & Iron Co., Warren, Pa.
 - Perfection Stove Co., Cleveland, Ohio.
 - Premier Burner Co., Cleveland, Ohio.
 - Pyro-Jet Div., Riverside Steel Co., Wheeling, W. Va.
 - Queen Stove Works, Inc., Albert Lea, Minn.
 - Quiet-Heat Mfg. Corp., Newark, N. J.
 - Radiation Furnace Corp., Benton Harbor, Mich.
 - Radiant Burners, Inc., Lombard, Ill.
 - Ranstone Co., Emeryville, Calif.
 - Rapid Heat Corp., Detroit, Mich.
 - Ray Oil Burner Co., San Francisco, Calif. (Industrial)
 - Reinhard Bros. Co., Minneapolis, Minn.
 - Revere Products, Inc., Detroit, Mich.
 - Reznor Mfg. Co., Mercer, Pa.
 - Roberts-Gordon Appliance Corp., Buffalo, N. Y.
 - Roberts Mfg. Co., Flint, Mich.
 - Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
 - Rybolt Heater Co., Ashland, Ohio.
 - S & S Heating Co., Detroit, Mich.
 - Schwab Safe Co., Lafayette, Ind.
 - Security Mfg. Co., Kansas City, Mo.
 - Shott & Co., Ed., Cincinnati, Ohio.
 - Silver Flame Industries, Inc., Detroit, Mich.
 - Smith Corp., A. O., Milwaukee, Wis.
 - Sonner Burner Co., Winfield, Kans.
 - Standard Fuel Engineering Co., Detroit, Mich.
 - Sterling Burner Corp., Detroit, Mich.
 - Sterling Engineering Co., St. Louis, Mo.
 - Sullivan Valve & Engineering Co., Butte, Mont.
 - Sunny Sue Burner Co., Syracuse, N. Y.
 - Supreme Gas Burner Mfg. Co., Holly, Mich.
 - Surface Combustion Corp., Toledo, Ohio.
 - Taylor Appliance & Mfg. Co., Royal Oak, Mich.
 - Temtrol Mfg. Co., Detroit, Mich.
 - Thermex Engineering Co., Chicago, Ill.
 - Thermomatic Corp., Willoughby, Ohio.
 - Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
 - Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
 - Triad Products Corp., Chicago, Ill.
 - Twin City Gas Specialty Co., Minneapolis, Minn.
 - United States Radiator Corp., Detroit, Mich.
 - Vacuum Gas Burner Corp., Olean, N. Y.
 - Van Tuyl & Associates, J. E., Cleveland, Ohio.
 - Vander Kaay Burner Co., Cleveland, Ohio.
 - Van's Gas Burner Service, Detroit, Mich.
 - Waterman-Waterbury Co., Minneapolis, Minn.
 - Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
 - Webster Engineering Co., Tulsa, Okla.
 - Will-Burt Co., Orrville, Ohio.
 - Williamson Heater Co., Cincinnati, Ohio.
 - York-Shiple, Inc., York, Penn.
 - Zink Co., John, Tulsa, Okla.
- Gas-Oil Combination**
- Automatic Firing Corp., St. Louis, Mo.
 - Johnson Co., S. T., Philadelphia, Pa. & Oakland, Calif.
 - Junior Co., J. C., Kansas City, Mo.
 - Lundt, Inc., Ernest C., Little Falls, N. J.
 - Preferred Utilities Mfg. Corp., New York, N. Y.
 - Quiet Automatic Burner Corp., Newark, N. J.
 - Rayfield Co., C. L., Chicago, Ill.
 - Ray Oil Burner Co., San Francisco, Calif.
 - Roberts-Gordon Appliance Corp., Buffalo, N. Y.
 - Siemon & Co., Kansas City, Mo.
 - Simplex Oil Heating Corp., New York, N. Y.
 - United Air Heaters, Inc., Seattle, Wash.
- Oil**
- Ace Engineering Co., Chicago Ill. (Rotary — industrial & commercial)
 - Acme Heat & Power Co., Inc., Brooklyn, N. Y. (Gun)
 - Acme Oil Burner Co., Inc., Cedar Rapids, Iowa. (Gun)
 - Air Filter Corp., Milwaukee, Wis. (Gun)
 - Airflame, Inc., Waukegan, Ill. (Gun)
 - Airtemp Div. Chrysler Corp., Dayton, Ohio.
 - Aldrich Co., Wyoming, Ill. (Gun)
 - All-Gas Equipment Co., Milwaukee, Wis.
 - American Furnace Co., St. Louis, Mo. (Gun)
 - American Mohawk Co., Inc., New York, N. Y. (Gun)
 - American Radiator & Standard Sanitary Corp., Pittsburgh, Pa. (Gun)
 - Anchor Div., Stratton & Terstegge Co., New Albany, Ind. (Gun)
 - Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa. (Gun)
 - Aston Products, Inc., Detroit, Mich. (Gun)
 - Auburn Burner Co., Auburn, Ind. (Gun)
 - Auto-Heat Corp., Middletown, Conn. (Gun)
 - Automatic Burner Corp., Chicago, Ill. (Gun)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Automatic Firing Corp., St. Louis, Mo. (Gun)
Automatic Furnace Co., Lansing, Mich. (Vaporizing)
Avery Farm Machinery Co., Hart Oil Burner Dept., Peoria, Ill. (Gun)
Bard Mfg. Co., Bryan, Ohio.
Beall Pipe & Tank Corp., Portland, Ore. (Range)
Beaver Mfg. Co., Portland, Ore. (Gun)
Beckett Corp., R. W., Elyria, Ohio (Gun)
Benner-Newman, Inc., Oakland, Calif. (Gravity)
Bethlehem Foundry & Machine Co., Bethlehem, Pa. (Gun).
Beyer Oil Burner Co., Rosamond, Calif. (Gravity)
• Boston Machine Works Co., Lynn, Mass. (Gravity)
Breeze Burners, Inc., Santa Fe, N. Mex. (Gravity)
Breeze Corp., Inc., Newark, N. J. (Gun)
Bryan Steam Corp., Peru, Ind. (Gun)
• Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gun)
Calimode, Inc., Atlanta, Ga. (Gravity)
Calor Oil Burner Corp., Hartford, Conn. (Gun).
Carlin Co., United States Burner Div., Wethersfield, Conn. (Gun)
Cary Mfg. Co., Waupaca, Wis. (Gravity)
Catskill Metal Works, Inc., Catskill, N. Y. (Gun)
• Century Engineering Corp., Cedar Rapids, Iowa. (Gun).
Chalmers Oil Burner Co., Minneapolis, Minn. (Gun and rotary).
Chandler Co., Cedar Rapids, Iowa (Gun)
Chicago Steel Furnace Co., Chicago, Ill.
Cleaver-Brooks Co., Hev-E-Oil Div., Milwaukee, Wis. (Gun)
Coal-O-Matic Co., Trucksville, Pa. (Gun)
• Conco Engineering Works, Mendota, Ill. (Gun, vaporizing)
Consolidated Industries, Inc., Lafayette, Ind. (Gun)
Cooper & Cooper, Inc., Pittsfield, Mass. (Gun)
Crane Co., Chicago, Ill. (Gun).
• Delco Appliance Div., General Motors Corp., Rochester, N. Y. (Gun)
D'Elia Oil Burner Co., Bridgeport, Conn. (Gun).
Delta Heating Corp., Jackson Hts., L. I., N. Y. (Gun)
DeLuxe Oil Burner Co., Seattle, Wash.
• Des Moines Furnace & Stove Repair Co., Des Moines, Iowa. (Gun)
DeSoto Oil Burner Corp., York, Pa. (Gun gravity)
• Dowagiac Steel Furnace Co., Dowagiac, Mich. (Gun).
Dualflame Div., H. & K. Appliance Co., Lima, Ohio. (Gun-with integral dom. water htg. unit)
East Coast Co., Boston, Mass. (Gun)
Eastern Oil & Equipment Co., Portland, Maine. (Gun).
Eckhart Mfg. Co., Inc., Union, N. J. (Gun)
Eddy Stoker Corp., Chicago, Ill. (Gun)
Electric Furnace-Man, Inc., Emmaus, Pa. (Gun)
Electro-Watt Inc., Seattle, Wash. (Gun)
• Electrol Burner Mfg. Co., Inc., Rutherford, N. J. (Gun)
Fairbanks, Morse & Co., Chicago, Ill. (Gun)
Fairfield Oil Heating Co., Inc., Greenwich, Conn. (Gun)
Florence Stove Co., Gardner, Mass. (Gravity).
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md. (Gun, rotary).
• Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio. (Gun)
Freeport Burner & Fan Co., Freeport, Ill. (Gun).
General Automatic Products Corp., Baltimore, Md. (Gun)
General Electric Co., Automatic Heating Div., Bloomfield, N. J. (Gun)
General Oil Heating Corp., West New York, N. J. (Gun)
Gilbert & Barker Mfg. Co., West Springfield, Mass. (Gun)
Gilmore & Co., Jackson, G., Columbus, Ohio. (Vaporizing)
Green Colonial Furnace Co., Des Moines, Iowa (Gun).
• Hall-Neal Furnace Co., Indianapolis, Ind. (Gun).
Harvey, Inc., Sid. Valley Stream, N. Y. (Gun)
Harvey Whipple, Inc., Springfield, Mass. (Gun).
Heatcraft Co., Louisville, Ky. (Gun)
Heating Specialties Co., Baltimore, Md. (Gravity)
Heat-Seal Burner Co., Omaha, Neb. (Gun).
Heil Co., Milwaukee, Wis. (Gun).
Herco Oil Burner Corp., Lancaster, Pa. (Gun).
Hershey Machine & Foundry Co., Manheim, Pa. (Gun)
HomEase Products Div., Paterson, N. J. (Gun)
Homer Furnace & Foundry Corp., Coldwater, Mich. (Gun)
Hotentot Co., Inc., Omaha, Neb. (Gun).
Howell Engineering Corp., Oregon, Ill. (Gun)
Hueller Mfg. Co., Inc., H. J., Brooklyn, N. Y. (Gun)
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
• International Oil Burner Co., St. Louis, Mo.
Iron Fireman Mfg. Co., Cleveland, Ohio. (Gun).
Jackson & Church Co., Saginaw, Mich. (Gun).
Johnson Co., S. T., Oakland, Calif. and Philadelphia, Pa. (Gun).
Junior Co., J. C., Kansas City, Mo.
Keith Furnace Co., Des Moines, Iowa. (Gun).
Kleen-Heat, Inc., Chicago, Ill. (Gun).
Kresky Mfg. Co., Inc., Petaluma, Calif. (Gravity).
• Kresno-Stamm Co., Palisades Park, N. J. (Gravity)
Laco Oil Burner Co., Inc., Griswold, Iowa. (Gun and Gravity).
LaSalle Oil Burner Co., Seattle, Wash. (Gun)
Lennox Furnace Co., Marshalltown, Iowa. (Gun).
Little Burner Co., Inc., H. C., San Rafael, Calif. (Gravity).
Lynn Products Co., Lynn, Mass. (Gun)
McKee Air Conditioning Co., Minneapolis, Minn. (Rotary)
McPherson Furnace & Supply Co., Portland, Ore. (Gun).
• Majestic Co., Huntington, Ind. (Gun & gravity).
Malleable Iron Fittings Co., Branford, Conn. (Gun).
Mason Machine Co., Inc., York, Pa. (Gun).
• Mayflower Air Conditioners, Inc., St. Paul, Minn. (Gun)
Mason Machine Co., Inc., York, Pa. (Gravity)
May Oil Burner Div., Gerotor May Corp., Baltimore, Md. (Gun).
Mechanical Products Co., Seattle, Wash. (Gun)
• Metromatic Mfg. Co., Everett, Mass.
• Meyer Furnace Co., Peoria, Ill. (Gun & gravity).
Miller Co., Meriden, Conn. (Gravity)
Montag Stove & Furnace Works, Portland, Ore. (Gun).
Moore Equipment Co., Lincoln, Neb. (Gun).
Mt. Hawley Mfg. Co., Peoria, Ill. (Gun).
• Mueller Furnace Co., L. J., Milwaukee, Wis. (Gun)
National Airoil Burner Co., Inc., Philadelphia, Pa. (Gun)
National Oil Burner Co., Brooklyn, N. Y. (Gun, Rotary)
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich. (Gun)
Norman Products Co., Inc., Columbus, Ohio. (Gravity).
Northwest Foundry & Furnace Co., Portland, Ore. (Gun)
• Nu-Way Corp., Rock Island, Ill. (Gun).
Oil Equipment Laboratories, Inc., Elizabeth, N. J. (Gun).
Pan-American Engineering Co., Berkeley, Calif. (Gun, rotary & turbine).
Paragon Oil Burner Corp., Brooklyn, N. Y. (Gun).
Paramount Supply Co., Lincoln, Neb. (Gun)
Peerless Oil Burner Co., Inc., Kansas City, Mo. (Gravity).
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa. (Gun).
Persson & Kellison, Seattle, Wash. (Gun, bakery)
Petroleum Heat & Power Co., Stamford, Conn. (Gun).
Preferred Utilities Mfg. Corp., New York, N. Y. (Rotary)
• Premier Furnace Co., Dowagiac, Mich.
Quick Furnace & Supply Co., Des Moines, Iowa. (Gun)
• Quiet Automatic Burner Corp., Newark, N. J. (Gun)
Quiet-Heat Mfg. Corp., Newark, N. J. (Gun).
Radiant Utilities Corp., Brooklyn, N. Y. (Gun)
Rapid Heat Corp., Detroit, Mich.
Ray Oil Burner Co., San Francisco, Calif. (Gun and rotary).
Rayfield Co., C. L., Chicago, Ill. (Gun & rotary).
Red Wing Oil Burner Co., Inc., Chelsea, Mass. (Gun)
Reif-Rexoil, Inc., Buffalo, N. Y. (Gun & rotary)
Richfield Mfg. Corp., New Rochelle, N. Y. (Gun)
Ronci Co., Inc., F., Centredale, R. I. (Gun)
Roscoe Mfg. Co., Seattle, Wash. (Gun)
• Round Oak Co., Inc., of Ind., Dowagiac, Mich. (Gun)
Rudy Mfg. Co., Dowagiac, Mich. (Gun)
• Rybolt Heater Co., Ashland, Ohio. (Gun)
Sandberg Mfg. Co., Portland, Ore. (Gun)
Schwab Safe Co., Lafayette, Ind. (Gun)
Scott-Newcomb, Inc., St. Louis, Mo. (Gun)
Selectrol Engineering Co., Brooklyn, N. Y. (Gun)
Shedlov Oil Burners, Inc., Minneapolis, Minn. (Gun)
Silent Glow Oil Burner Corp., Hartford, Conn. (Gun & rotary).
Silent Sioux Oil Burner Corp., Orange City, Iowa. (Gravity)
Simplex Oil Heating Corp., New York, N. Y. (Gun, rotary, turbine).
Spark Stove Co., Oakland, Calif.
Standard Airoil Corp., Newark, N. J. (Gun)
Stokol Stoker Co., Inc., Dayton, Ohio. (Gun)
• Sundstrand Engineering Co., Rockford, Ill. (Gun)
Sun-Fire Stoker Corp., New Albany, Ind. (Gun)
• Sun-Ray Burner Mfg. Corp., Jamaica, N. Y. (Gun)
Swirling Heat Corp., Arlington, Va. (Vapor pressure)
• Syncromatic Corp., Watertown, Wis. (Gun)
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich. (Gun & rotary).
• Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio. (Gun, rotary)
Tru-Heat Co., Trenton, N. J. (Gun)
U. S. Machine Corp., Lebanon, Ind. (Gun)
United States Radiator Corp., Detroit, Mich. (Gun).
Universal Steel Fabricating Co., Seattle, Wash. (Gun)
Victor Oil Burner Mfg. Co., Hartford, Conn. (Gravity).
Viking Mfg. Corp., Cleveland, Ohio. (Gun)
Volcano Burner Corp., New York, N. Y. (Gun).
Waltham Oil Burner Co., E. Boston, Mass. (Gun)
• Waterman-Waterbury Co., Minneapolis, Minn. (Gun).

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Wayne Home Equipment Co., Inc., Fort Wayne, Ind. (Gun)
 Weatherall Engineers, Inc., Providence, R. I. (Gun).
 Westcott & Son, Inc., John, Galena, Ill. (Gun).
 Will-Burt Co., Orrville, Ohio (Gun)
 • Williams Oil-O-Matic, Div. Eureka Williams Corp., Bloomington, Ill. (Gun).
 Wisconsin Oil Burner Co., Madison, Wis. (Gun)
 York Electric & Machine Co., York, Pa. (Gun, Gravity).
 York-Shipley, Inc., York, Pa. (Gun).

BURRING MACHINES

See Machines, Burring

CABINETS AND CASINGS

Acme Mfg. Co., Philadelphia, Pa.
 Airwasher Corp., Eaton Rapids, Mich.
 • Armstrong Furnace Co., Columbus Ohio & Des Moines, Iowa.
 • Atlas Mfg. Co., St. Paul, Minn.
 Berger Furnace Mfg. Co., Pittsburgh, Pa.
 Berger Mfg. Co., Div. of Republic Steel Corp., Canton, Ohio.
 Biersch & Neidermeyer Co., Milwaukee, Wis.
 • Brundage Co., Kalamazoo, Mich.
 • Char-Gale Mfg. Co., Minneapolis, Minn.
 Chicago Metal Mfg. Co., Chicago, Ill.
 Dahlstrom Metallic Door Co., Jamestown, N. Y. (Special)
 Edwards Mfg. Co., Inc., Cincinnati, Ohio.
 Falstrom Co., Passaic, N. J.
 Harrison Sheet Steel Co., Chicago, Ill.
 • Kirk & Blum Mfg. Co., Cincinnati, Ohio.
 • Lau Blower Co., Dayton, Ohio.
 Lennox Furnace Co., Marshalltown, Iowa.
 Lindsay Structure, Inc., Skokie, Ill.
 Maysteel Products, Inc., Brooklyn, N. Y.
 Moss Industries, Inc., Brooklyn, N. Y.
 Northwest Foundry & Furnace Co., Portland, Ore.
 Riester & Thesmacher Co., Cleveland, Ohio.
 St. Charles Mfg. Co., St. Charles, Ill.
 Standard Pressed Steel Co., Jenkintown, Pa.
 Steinhorst & Sons, Inc., Emil, Utica, N. Y.
 Utica Products, Inc., Utica, N. Y.
 Zick Sheet Metal Works, Dearborn, Mich.

CAPS AND TOPS, CHIMNEY

• Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
 Acme Mfg. Co., Philadelphia, Pa.
 • Adams Co., Dubuque, Iowa.
 Airjet Ventilator Co., Pasadena, Calif.
 Berger Furnace Mfg. Co., Pittsburgh, Pa.
 Bieler & Sons, Inc., L., Long Island City, N. Y.
 Breidert Co., G. C., Los Angeles, Calif.
 • Coleman Co., Inc., Wichita, Kans. (Crowns)
 Edwards Mfg. Co., Inc., Cincinnati, Ohio.
 Excelsior Steel Furnace Co., Chicago, Ill.
 Excelsior Stove & Mfg. Co., Quincy, Ill.
 Hirschman-Pohl Co., Inc., LeRoy, N. Y.
 Iwan Bros. Inc., South Bend, Ind.
 Lamb & Ritchie Co., Cambridge, Mass.
 Little Burner Co., Inc., H. C., San Rafael, Calif.
 Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
 Penn Supply & Metal Corp., Philadelphia, Pa.
 Penn Ventilating Co., Philadelphia, Pa.
 Royal-Apex Mfg. Corp., Brooklyn, N. Y.
 Schoedinger, F. O., Columbus, Ohio.
 Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
 Sioux Steel Co., Sioux Falls, S. D.
 Southbridge Roofing Co., Inc., Southbridge, Mass.
 Sterling Foundry Co., Sterling, Ill. (Cast Iron).
 Tesco, Inc., Tulsa, Okla.
 Tierney Rotor Ventilator Co., Minneapolis, Minn.
 Waverly Heating Supply Co., Boston, Mass.
 • Wallace Co., William, Metalbestos Div., Belmont, Calif.

CASINGS

See Cabinets and Casings

CAULKING COMPOUNDS

See Compounds, Caulking

CEILINGS, METAL

• Ajax Furnace Fitting Co., Div., Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
 Edwards Mfg. Co., Inc., Cincinnati, Ohio.
 Friedley-Voshart Co., Chicago, Ill.
 Harrison Sheet Steel Co., Chicago, Ill.
 Hauserman Co., E. F., Cleveland, Ohio.
 Klauer Mfg. Co., Dubuque, Iowa.
 Reynolds Metals Co., Louisville, Ky. (Aluminum).

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
 Tiffin Art Metal Co., Tiffin, Ohio.
 Wheeling Corrugating Co., Wheeling, W. Va.

CEMENT

Furnace

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
 • Armstrong Co., Detroit, Mich.
 Bothfield Refractories Co., Philadelphia, Pa.
 Carey Mfg. Co., Philip, Cincinnati, Ohio.
 Chicago Fire Brick Co., Chicago, Ill.
 Clinton Metallic Paint Co., Clinton, N. Y.
 Continental Products Co., Euclid, Ohio.
 Ehret Magnesia Mfg. Co., Valley Forge, Pa.
 Fireline Stove & Furnace Lining Co., Chicago, Ill. (Asbestos).
 Hercules Chemical Co., Inc., New York, N. Y.
 Hetzel Roofing Products Co., Newark, N. J.
 Johns-Manville, New York, N. Y.
 Keasbey Co., Robert A., New York, N. Y.
 Laclede-Christy Co., St. Louis, Mo.
 Lastik Products Co., Inc., Pittsburgh, Pa.
 McLeod & Henry Co., Inc., Troy, N. Y.
 Munn and Steele, Inc., Newark, N. J.
 Nebel Mfg. Co., Cleveland, Ohio.
 Pecora Paint Co., Philadelphia, Pa.
 Plastic Products Co., Detroit, Mich.
 Preferred Utilities Mfg. Corp., New York, N. Y.
 Prestite Engineering Co., St. Louis, Mo.
 Quigley Co., Inc., New York, N. Y.
 Refractory & Insulation Corp., New York, N. Y.
 Ruberoid Co., New York, N. Y.
 Rutland Fire Clay Co., Rutland, Vt.
 Sall Mountain Co., Chicago, Ill.
 Sauereisen Cements Co., Pittsburgh, Pa.
 S.O.S. Products Co., Inc., Brooklyn, N. Y.
 Standard Asbestos Mfg. Co., Chicago, Ill.
 Standard Fuel Engineering Co., Detroit, Mich.
 Tanms Industries, Inc., Chicago, Ill.
 United Gilsonite Laboratories, Scranton, Pa.
 • Walsh Refractories Corp., St. Louis, Mo.
 • Wilson, Inc., Grant, Chicago, Ill.

Insulating

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos, mineral wool & magnesia).
 Alton Mineral Wool Insulation Co., St. Louis, Mo. (High temperature).
 Armstrong Cork Co., Lancaster, Pa.
 Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
 Bird Archer Co., Philadelphia, Pa.
 Bothfield Refractories Co., Philadelphia, Pa.
 Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos, magnesia, rock wool)
 Chicago Fire Brick Co., Chicago, Ill. (Asbestos).
 Denver Fire Clay Co., Denver, Colo. (Vermiculite & rock wool; high temperature)
 Eagle-Picher Co., Cincinnati, Ohio.
 Ehret Magnesia Mfg. Co., Valley Forge, Pa. (Asbestos).
 Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
 Hetzel Roofing Products Co., Newark, N. J.
 International Vermiculite Co., Girard, Ill.
 Johns-Manville, New York, N. Y. (Asbestos).
 Keasbey Co., Robert A., New York, N. Y. (Asbestos).
 Keasbey & Mattison Co., Ambler, Pa. (Asbestos).
 Laclede-Christy Co., St. Louis, Mo. (Asbestos).
 McLeod & Henry Co., Inc., Troy, N. Y.
 Mundet Cork Corp., North Bergen, N. J. (Magnesia).
 Munn and Steele, Inc., Newark, N. J. (Vermiculite).
 Norristown Magnesia & Asbestos Co., Norristown, Pa. (Asbestos, rockwool & magnesia).
 Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt & asbestos).
 • Owens-Corning Fiberglass Corp., Toledo, Ohio. (Mineral wool).
 Peterson Co., B. A., Dowagiac, Mich. (Asbestos).
 Plant Rubber & Asbestos Works, Inc., San Francisco, Calif. (Asbestos).
 Preferred Utilities Mfg. Corp., New York, N. Y.
 Pyrolite Products Co., Cleveland, Ohio.
 Quigley Co., Inc., New York, N. Y. (Asbestos).
 Ramtite Co., Div. of Obermayer Co., Chicago, Ill.
 Refractory & Insulation Corp., New York, N. Y. (Castable refractory).
 • Rex Roto Corp., Detroit, Mich.
 Robinson Insulation Co., Great Falls, Mont. (Vermiculite).
 Ruberoid Co., New York, N. Y. (Asbestos).
 Rutland Fire Clay Co., Rutland, Vt. (Asbestos).
 Sall Mountain Co., Chicago, Ill.
 Sauereisen Cements Co., Pittsburgh, Pa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos).
 Standard Fuel Engineering Co., Detroit, Mich. (Rock wool & asbestos).
 Therminsul Corp., Kalamazoo, Mich.
 Thompson & Co., Oakmont, Pa. (Asbestos).
 United States Mineral Wool Co., South Milwaukee, Wis. (Mineral wool).
 • Walsh Refractories Corp., St. Louis, Mo.
 • Wilson, Inc., Grant, Chicago, Ill. (Asbestos).
 Zonolite Co., Chicago, Ill. (Vermiculite).

Roof

- Acme Asbestos Covering & Flooring Co., Chicago, Ill.
 American-Marietta Co., Chicago, Ill.
 • Armstrong Co., Detroit, Mich.
 Baer Bros., New York, N. Y.
 Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
 Bird & Son, Inc., East Walpole, Mass.
 Blue Ridge Talc Co., Inc., Henry, Va.
 Calbar Paint & Varnish Co., Philadelphia, Pa.
 Carey Mfg. Co., Philip, Cincinnati, Ohio.
 Carter Paint Co., Liberty, Ind.
 Celotex Corp., Chicago, Ill.
 Certain-teed Products Corp., Ardmore, Pa.
 Clinton Metallic Paint Co., Clinton, N. Y.
 Connors Paint Mfg. Co., Wm., Troy, N. Y.
 Continental Products Co., Euclid, Ohio.
 Coopers Creek Chemical Corp., West Conshohocken, Pa.
 Ehret Magnesia Mfg. Co., Valley Forge, Pa.
 Flintkote Co., New York, N. Y.
 Glidden Co., Cleveland, Ohio.
 Hetzel Roofing Products Co., Newark, N. J.
 Horn Co., Inc., A. C., Long Island City, N. Y.
 • Inland Steel Products Co., Milwaukee, Wis.
 Iowa Paint Mfg. Co., Des Moines, Iowa. (Asphalt).
 Johns-Manville, New York, N. Y.
 Koppers Co., Inc., Pittsburgh, Pa.
 Lastik Products Co., Inc., Pittsburgh, Pa.
 Lehon Co., Chicago, Ill.
 Midland Paint & Varnish Co., Cleveland, Ohio.
 National Mfg. Corp., Tonawanda, N. Y.
 Nebel Mfg. Co., Cleveland, Ohio.
 North American Mogul Products Co., Cleveland, Ohio.
 Ohm-lac Paint & Refining Co., Chicago, Ill.
 Pecora Paint Co., Philadelphia, Pa. (Asbestos).
 • Potts-Farrington Co., Philadelphia, Pa.
 Prestite Engineering Co., St. Louis, Mo.
 Proie & Coogan Heating Co., Pittsburgh, Pa.
 Ruberoid Co., New York, N. Y.
 Rutland Fire Clay Co., Rutland, Vt.
 Smooth-On Mfg. Co., Jersey City, N. J.
 Sonneborn Sons, Inc., L., New York, N. Y.
 Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
 Thompson & Co., Oakmont, Pa.
 Tropical Paint & Oil Co., Cleveland, Ohio.
 United Gilsonite Laboratories, Scranton, Pa.
 United States Gypsum Co., Chicago, Ill.

CEMENT, REFRACTORY

See Refractories

CHAIN, FURNACE

- American Chain Div., American Chain & Cable Co., Inc., York, Pa.
 Bead Chain Mfg. Co., Bridgeport, Conn.
 Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
 • Hart & Cooley Mfg. Co., Holland, Mich.
 Hodell Chain Co., Cleveland, Ohio.
 McKay Co., Pittsburgh, Pa.
 Russell Mfg. Co., Inc., John M., Naugatuck, Conn.
 Turner & Seymour Mfg. Co., Torrington, Conn.
 • United States Register Co., Battle Creek, Mich.

CHAMBERS, COMBUSTION, PREFORMED

- Amerform Corp., Philadelphia, Pa.
 American Corp., Philadelphia, Pa.
 • Boston Machine Works Co., Lynn, Mass. (Insulating brick).
 Certified Furnace Co., St. Paul, Minn. (Firebrick).
 Chicago Fire Brick Co., Chicago, Ill. (Fire clay).
 Green Fire Brick Co., A. P., Mexico, Mo. (Fire clay, insulating brick).
 Harvey, Inc., Sid, Valley Stream, N. Y.
 Hasko Utilities Co., New York, N. Y. (Refractory).
 Insulation & Refractories Co., Williamson, N. Y. (Refractory concrete & insulating refractory).
 Laclede-Christy Co., St. Louis, Mo.
 McLeod & Henry Co., Inc., Troy, N. Y.

- Mechanical Products Co., Seattle, Wash. (Stainless).
 Monogram Products Co., Inc., Philadelphia, Pa. (Insulating refractory).
 Munn and Steele, Inc., Newark, N. J. (Light fired refractory).
 National Aircoil Burner Co., Inc., Philadelphia, Pa.
 Oil Equipment Mfg. Co., New Haven, Conn. (Inconel).
 Peterson Co., B. A., Dowagiac, Mich.
 Preferred Utilities Mfg. Corp., New York, N. Y.
 Red Wing Oil Burner Co., Inc., Chelsea, Mass. (Light weight refractory).
 Refractory & Insulation Corp., New York, N. Y. (Refractory).
 Rehm, R., St. Albans, N. Y. (Radiant silicons).
 • Rex Roto Corp., Detroit, Mich.
 Robinson Insulation Co., Great Falls, Mont.
 S.O.S. Products Co., Inc., Brooklyn, N. Y.
 Sandberg Mfg. Co., Portland, Ore. (Stainless steel).
 Steco Steel Co., Michigan City, Ind. (Stainless steel).
 Universal Zonolite Insulation Co., Chicago, Ill. (Vermiculite concrete).
 • Walsh Refractories Corp., St. Louis, Mo. (Refractory).
 Webber Co., A. R., New Haven, Conn. (Refractory).

CHANNELS

See Angles, Bars, Beams, Channels and Tees
 (Light Weight Shapes)

CHEMICALS, RUST PREVENTIVE

- American Chemical Paint Co., Ambler, Pa.
 Carbide & Carbon Chemicals Div. Union Carbide & Carbon Corp., New York, N. Y.
 Industrial Service Laboratories, Milwaukee, Wis.
 Klem Chemicals, Inc., Dearborn, Mich.
 Neilson Chemical Co., Detroit, Mich.
 North American Mogul Products Co., Cleveland, Ohio.
 Oakite Products, Inc., New York, N. Y.
 Parker Rust-Proof Co., Detroit, Mich.
 Pennsylvania Refining Co., Ohio Div., Cleveland, Ohio.
 Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
 Protective Coatings, Inc., Detroit, Mich. (Remover).
 Rossaul Co., New York, N. Y.
 Sudbury Laboratory, South Sudbury, Mass.
 S.O.S. Products Co., Inc., Brooklyn, N. Y.
 Truscon Laboratories, Detroit, Mich.
 Turco Products, Inc., Los Angeles, Calif.
 Western Reserve Laboratories, Cleveland, Ohio.
 Wolfe-Kote Co., Sheboygan, Wis.

CHIMNEY CAPS

See Caps and Tops, Chimney

CHIMNEY LININGS

See Linings, Chimney

CHIMNEYS, PREFABRICATED

- Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel).
 • Van-Packer Corp., Chicago, Ill.

CLEANERS, POLISHERS AND FINISHERS, METAL

- Allen Co., Inc., L. B., Chicago, Ill. (Stainless steel & monel).
 American Chemical Paint Co., Ambler, Pa.
 du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (All metals).
 Klem Chemicals, Inc., Dearborn, Mich.
 NuSteel Co., Chicago, Ill. (Aluminum & stainless steel).
 Oakite Products, Inc., New York, N. Y.
 Parker Rust-Proof Co., Detroit, Mich.
 Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
 Protective Coatings, Inc., Detroit, Mich.
 Rossaul Co., New York, N. Y.
 Standard Steel Spring Co., Gary, Ind.
 Tamms Industries Inc., Chicago, Ill.
 Truscon Laboratories, Detroit, Mich.
 Turco Products, Inc., Los Angeles, Calif.
 Western Reserve Laboratories, Cleveland, Ohio.
 Wolfe-Kote Co., Sheboygan, Wis.

CLEANERS, VACUUM, FURNACE

- Baker Furnace & Cleaner Mfg. Co., Toledo, Ohio.
 Black & Decker Mfg. Co., Towson, Md.
 Breuer Electric Mfg. Co., Chicago, Ill.
 Chicago Blower Corp., Chicago, Ill.
 • Doyle Vacuum Cleaner Co., Grand Rapids, Mich.
 General Blower Co., Morton Grove, Ill.
 • General Electric Co., Bridgeport, Conn.
 Ideal Industries, Inc., Sycamore, Ill.
 • Kent Co., Inc., Rome, N. Y.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Molloy Machine Corp., Chicago, Ill.
- National Super Service Co., Inc., Toledo, Ohio.
- Spencer Turbine Co., Hartford, Conn.
- Van Dorn Electric Tool Co., Towson, Md.

CLEAT BENDERS

See Machines, Cleat Bending

CLEATS, DRIVE

See Connectors, Metal

CLIPS, FASTENING, ROOFING

- Bard Mfg. Co., Bryan, Ohio.
- Berger Bros. Co., Philadelphia, Pa.
- Bridges Foundry Co., Philadelphia, Pa.
- Diamond Expansion Bolt Co., Inc., Garwood, N. J.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Inland Steel Products Co., Milwaukee, Wis.
- Lexington Supply Co., Cleveland, Ohio.
- Southbridge Roofing Co., Inc., Southbridge, Mass.

CLIPS AND TIPS, DAMPER

- Adams Co., Dubuque, Iowa.
- Air Control Products, Inc., Coopersville, Mich.
- Berger Bros. Co., Philadelphia, Pa.
- Gerett Corp., M. A., Milwaukee, Wis.
- Griswold Mfg. Co., Erie, Pa.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Hoves-Woods Co., Cambridge, Mass.
- Kerentoff, G. L., Cincinnati, Ohio.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Sevenson Mfg. & Supply Co., Milwaukee, Wis.
- United States Register Co., Battle Creek, Mich.
- Young Regulator Co., Cleveland, Ohio.

CO₂ ANALYZERS

See Analyzers, CO₂

COAL BURNERS, AUTOMATIC

See Stokers

COILS

Cooling, Direct Expansion, Finned

- Acme Industries, Inc., Jackson, Mich.
- Aerofin Corp., Syracuse, N. Y.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Blower Corp., Detroit, Mich.
- American Coils, Inc., Newark, N. J.
- Beacon-Morris Corp., Boston, Mass.
- Betz Corp., Hammond, Ind.
- Bohn Aluminum & Brass, Detroit, Mich.
- Bush Mfg. Co., West Hartford, Conn.
- Conditionaire Unit Co., Chicago, Ill.
- Drayer-Hanson, Inc., Los Angeles, Calif.
- Frick Co., Waynesboro, Pa.
- Frigidaire Div., General Motors Corp., Dayton, Ohio.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
- Griscom-Russell Co., New York, N. Y.
- Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- Howe Ice Machine Co., Chicago, Ill.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Kennard Corp., St. Louis, Mo.
- Kennedy, Inc., David E., Brooklyn, N. Y.
- Kramer Trenton Co., Trenton, N. J.
- Larkin Coils, Inc., Atlanta, Ga.
- McCord Corp., Detroit, Mich.
- McQuay, Inc., Minneapolis, Minn.
- Manufacturer's Fin Coil Co., Chicago, Ill.
- Marlo Coil Co., St. Louis, Mo.
- Mitchell & Co., Inc., W. K., Philadelphia, Pa.
- Modine Mfg. Co., Racine, Wis.
- Murray Mfg. Co., D. J., Wausau, Wis.
- Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
- Pedrick Tool & Machine Co., Philadelphia, Pa.
- Peerless of America, Inc., Chicago, Ill.
- Refrigeration Appliances, Inc., Chicago, Ill.
- Refrigeration Economics Co., Inc., Canton, Ohio.
- Rempe Co., Chicago, Ill.
- Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh, Pa.
- Rome-Turney Radiator Co., Rome, N. Y.
- Super Radiator Corp., Minneapolis, Minn.
- Tenney Engineering, Inc., Newark, N. J.
- Trane Co., LaCrosse, Wis.
- Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
- United States Air Conditioning Corp., Minneapolis, Minn.

- Vilter Mfg. Co., Milwaukee, Wis.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- York Corp., York, Pa.
- Young Radiator Co., Racine, Wis.

Cooling, Water

- Acme Industries, Inc., Jackson, Mich.
- Aerofin Corp., Syracuse, N. Y.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Beacon-Morris Corp., Boston, Mass.
- Bell & Gossett Co., Morton Grove, Ill.
- Bohn Aluminum & Brass, Detroit, Mich.
- Bush Mfg. Co., West Hartford, Conn.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Chicago Fan & Fin Coil Co., Chicago, Ill.
- Conditionaire Unit Co., Chicago, Ill.
- Drayer-Hanson, Inc., Los Angeles, Calif.
- Frick Co., Waynesboro, Pa.
- Frigidaire Div., General Motors Corp., Dayton, Ohio.
- G & O Mfg. Co., New Haven, Conn.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
- Griscom-Russell Co., New York, N. Y.
- Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- Howe Ice Machine Co., Chicago, Ill.
- Industrial Mfg. & Engineering Co., Chicago, Ill.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Kennard Corp., St. Louis, Mo.
- Kennedy, Inc., David E., Brooklyn, N. Y.
- Kramer Trenton Co., Trenton, N. J.
- Larkin Coils, Inc., Atlanta, Ga.
- McCord Corp., Detroit, Mich.
- McQuay, Inc., Minneapolis, Minn.
- Manufacturer's Fin Coil Co., Chicago, Ill.
- Marlo Coil Co., St. Louis, Mo.
- Modine Mfg. Co., Racine, Wis.
- Murray Mfg. Co., D. J., Wausau, Wis.
- National Pipe Bending Co., New Haven, Conn.
- Nesbitt, Inc., John J., Philadelphia, Pa.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
- Pedrick Tool & Machine Co., Philadelphia, Pa.
- Peerless of America, Inc., Chicago, Ill.
- Refrigeration Appliances, Inc., Chicago, Ill.
- Refrigeration Economics Co., Inc., Canton, Ohio.
- Rempe Co., Chicago, Ill.
- Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh, Pa.
- Rome-Turney Radiator Co., Rome, N. Y.
- Super Radiator Corp., Minneapolis, Minn.
- Tenney Engineering, Inc., Newark, N. J.
- Trane Co., LaCrosse, Wis.
- Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
- United States Air Conditioning Corp., Minneapolis, Minn.
- Vilter Mfg. Co., Milwaukee, Wis.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Whitlock Mfg. Co., Hartford, Conn.
- Wing Mfg. Co., L. J., New York, N. Y.
- York Corp., York, Pa.
- Young Radiator Co., Racine, Wis.

Heating

- Aerofin Corp., Syracuse, N. Y.
- American Blower Corp., Detroit, Mich.
- American Coils, Inc., Newark, N. J.
- Bayley Blower Co., Milwaukee, Wis.
- Beacon-Morris Corp., Boston, Mass.
- Bohn Aluminum & Brass, Detroit, Mich.
- Bush Mfg. Co., West Hartford, Conn.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Chicago Fan & Fin Coil Co., Chicago, Ill.
- Conditionaire Unit Co., Chicago, Ill.
- Drayer-Hanson, Inc., Los Angeles, Calif.
- G & O Mfg. Co., New Haven, Conn.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- Griscom-Russell Co., New York, N. Y.
- Industrial Mfg. & Engineering Co., Chicago, Ill.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Kennard Corp., St. Louis, Mo.
- Kennedy, Inc., David E., Brooklyn, N. Y.
- Kramer Trenton Co., Trenton, N. J.
- Larkin Coils, Inc., Atlanta, Ga.
- McCord Corp., Detroit, Mich.
- McQuay, Inc., Minneapolis, Minn.
- Manufacturer's Fin Coil Co., Chicago, Ill.
- Marlo Coil Co., St. Louis, Mo.
- Modine Mfg. Co., Racine, Wis.
- Murray Mfg. Co., D. J., Wausau, Wis.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

National Pipe Bending Co., New Haven, Conn.
 Nesbitt, Inc., John J., Philadelphia, Pa.
 New York Blower Co., Chicago, Ill.
 Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
 Refrigeration Appliances, Inc., Chicago, Ill.
 Refrigeration Economics Co., Inc., Canton, Ohio.
 Rempe Co., Chicago, Ill.
 Roessing Mfg. Co., Pittsburgh, Pa.
 Rome-Turney Radiator Co., Rome, N. Y.
 Standard Heater & Oil Equipment Co., Jersey City, N. J.
 Super Radiator Corp., Minneapolis, Minn.
 Tenney Engineering, Inc., Newark, N. J.
 Trane Co., La Crosse, Wis.
 Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
 United States Air Conditioning Corp., Minneapolis, Minn.
 Vulcan Radiator Co., Hartford, Conn.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Whitlock Mfg. Co., Hartford, Conn.
 Wing Mfg. Co., L. J., New York, N. Y.
 York Corp., York, Pa.
 Young Radiator Co., Racine, Wis.

COILS, FIRE POT, DOMESTIC HOT WATER

- Adams Co., Dubuque, Iowa.
- Air Controls, Inc., Cleveland, Ohio.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Globe Machinery & Supply Co., Des Moines, Iowa.
- Harvey-Whipple, Inc., Springfield, Mass.
- Lennox Furnace Co., Marshalltown, Iowa.
- Marshall Furnace Co., Marshall, Mich.
- Rempe Co., Chicago, Ill.

COLLECTORS, BLOW PIPE

- Aerotec Corp., Greenwich, Conn.
- Agel-Detroit Co., Ann Arbor, Mich.
- American Air Filter Co., Inc., Louisville, Ky.
- Blower Application Co., Milwaukee, Wis.
- Buffalo Forge Co., Buffalo, N. Y.
- Carolina Blower Co., Inc., Greensboro, N. C.
- Centri-Spray Co., Detroit, Mich.
- Chicago Blower Corp., Chicago, Ill.
- Day Co., Minneapolis, Minn.
- Dust Suppression & Engineering Co., Lake Orion, Mich.
- Goergen-Mackworth Engineering Co., Buffalo, N. Y. (Rarefied & Cyclone)
- Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
- Kirk & Blum Mfg. Co., Cincinnati, Ohio.
- Kopperman & Sons, Joseph, Philadelphia, Pa.
- Litman, Morris, Springfield, Mass.
- Lumm Co., A. H., Toledo, Ohio.
- Newcomb-Detroit Co., Detroit, Mich.
- Northern Blower Co., Cleveland, Ohio.
- Pangborn Corp., Hagerstown, Md.
- Peters-Dalton, Inc., Detroit, Mich.
- Pratt-Daniel Corp., East Port Chester, Conn.
- Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
- Ruemelin Mfg. Co., Milwaukee, Wis.
- Schmieg Industries, Detroit, Mich.
- Schneible Co., Claude B., Detroit, Mich.
- Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., Inc., St. Louis, Mo.
- Sly Mfg. Co., W. W., Cleveland, Ohio.
- Stranwitz & Co., Inc., W. J., Camden, N. J.
- Torrit Mfg. Co., St. Paul, Minn.
- Western Blower Co., Seattle, Wash.
- Western Precipitation Corp., Los Angeles, Calif.
- Winkler & Sons, Inc., A. E., Milwaukee, Wis.
- Young & Bertke Co., Cincinnati, Ohio.

COMBUSTION CHAMBERS

See Chambers, Combustion, Preformed; Baffles, Combustion Chambers, Oil Burner and Stoker

COMBUSTION CONTROLS

See Controls; Dampers, Draft

COMPOUNDS, AIR FRESHENING

- Airkem, Inc., New York, N. Y.
- Carbide & Carbon Chemicals Div. Union Carbide & Chemical Corp., New York, N. Y.
- Lundy Mfg. Corp., Long Island City, N. Y.

COMPOUNDS, CAULKING

- Acme Refining Co., Cleveland, Ohio.
- Allmetal Weatherstrip Co., Chicago, Ill.
- American Fluoresit Co., Cincinnati, Ohio.

- American-Marietta Co., Chicago, Ill.
- Armstrong Co., Detroit, Mich.
- Babbitt Chemical Specialties Co., New York, N. Y.
- Baer Bros., New York, N. Y.
- Blue Ridge Talc Co., Inc., Henry, Va.
- Calbar Paint & Varnish Co., Philadelphia, Pa. (Also caulking guns)
- Carey Mfg. Co., Philip, Cincinnati, Ohio. (Colored)
- Carter Paint Co., Liberty, Ind.
- Chamberlin Co. of America, Detroit, Mich.
- Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
- Continental Products Co., Euclid, Ohio.
- Eagle-Picher Co., Cincinnati, Ohio.
- Glidden Co., Cleveland, Ohio.
- Goodrich Co., B. F., Akron, Ohio.
- Hercules Chemical Co., Inc., New York, N. Y.
- Hetzel Roofing Products Co., Newark, N. J.
- Horn Co., Inc., A. C., Long Island City, N. Y.
- Iowa Paint Mfg. Co., Des Moines, Iowa.
- Irrington Varnish & Insulator Co., Irvington, N. J.
- Johns-Manville, New York, N. Y.
- Lastik Products Co., Inc., Pittsburgh, Pa.
- Lehon Co., Chicago, Ill.
- Metropolitan Refining Co., Inc., Long Island City, N. Y.
- Midland Paint & Varnish Co., Cleveland, Ohio.
- Mortell Co., J. W., Kankakee, Ill.
- National Mfg. Corp., Tonawanda, N. Y.
- Nebel Mfg. Co., Cleveland, Ohio.
- North American Mogul Products Co., Cleveland, Ohio.
- Ohlmac Paint & Refining Co., Chicago, Ill. (Asphalt)
- Pecora Paint Co., Philadelphia, Pa.
- Pittsburgh Plate Glass Co., Pittsburgh, Pa.
- Plastic Products Co., Detroit, Mich.
- Pressite Engineering Co., St. Louis, Mo.
- Quigley Co., Inc., New York, N. Y.
- Radiator Specialty Co., Charlotte, N. C.
- Robertson Co., H. H., Pittsburgh, Pa.
- Sherwin-Williams Co., Cleveland, Ohio.
- Sipe & Co., James B., Pittsburgh, Pa.
- Smooth-on Mfg. Co., Jersey City, N. J.
- Sonneborn Sons, Inc., L., New York, N. Y.
- Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
- Tamms Industries Inc., Chicago, Ill.
- Thompson & Co., Oakmont, Pa.
- Tropical Paint & Oil Co., Cleveland, Ohio.
- Truscon Laboratories, Detroit, Mich.
- X-Pando Corp., Long Island City, N. Y.

COMPOUNDS, CLEANING, AIR FILTER

- Carolina Aniline & Extract Co., Inc., Charlotte, N. C. (Humidifying systems).
- Oakite Products, Inc., New York, N. Y.
- Turco Products, Inc., Los Angeles, Calif.

COMPRESSORS, REFRIGERATING

- Airtemp Div. Chrysler Corp., Dayton, Ohio.
- Baker Ice Machine Co., Inc., South Windham, Maine.
- Brunner Mfg. Co., Utica, N. Y.
- Carrier Corp., Syracuse, N. Y.
- Copeland Refrigeration Corp., Sidney, Ohio.
- Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
- Dicler Div. General Machine & Mfg. Co., Berwick, Pa.
- Frick Co., Waynesboro, Pa.
- Frigidaire Div. General Motors Corp., Dayton, Ohio.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- General Machinery Co., Spokane, Wash. (Ammonia).
- General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
- Howe Ice Machine Co., Chicago, Ill.
- Kauffman Air Conditioning Corp., St. Louis, Mo.
- Lehigh Mfg. Co., Lancaster, Pa.
- Lynch Corp., Toledo, Ohio.
- Mills Novelty Co., Chicago, Ill.
- Reynolds Mfg. Co., Springfield, Mo.
- Servel, Inc., Evansville, Ind.
- Tecumseh Products Co., Tecumseh, Mich.
- Trane Co., LaCrosse, Wis.
- Universal Cooler Div., Marion, Ohio.
- Vilter Mfg. Co., Milwaukee, Wis.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Worthington Pump & Machinery Corp., Harrison, N. J.
- Yeomans Bros. Co., Chicago, Ill.
- York Corp., York, Pa.

CONDUCTOR PIPE AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor

• Advertisement in this issue. See Index to Advertisers, page 104-D.

CONNECTORS, DUCT, FLEXIBLE

- American Ventilating Hose Co., New York, N. Y.
- Armstrong Cork Co., Lancaster, Pa.
- Bauer & Black Div. Kendall Co., Chicago, Ill. (Polyken industrial tape)
- Chicago Metal Hose Corp., Maywood, Ill.
- Corbman Bros., Inc., Philadelphia, Pa.
- Felters Co., Inc., Boston, Mass. (Felt)
- Flexible Tubing Corp., Guilford, Conn.
- Ideen Co., Chicago, Ill.
- St. Clair Rubber Co., Marysville, Mich. (Fiberglass)
- United States Rubber Co., New York, N. Y.
- Wagner Awning & Mfg. Co., Cleveland, Ohio.
- Wilson, Inc., Grant, Chicago, Ill. (Asbestos).
- Wiremold Co., Hartford, Conn.

CONNECTORS, METAL, FOR METAL DUCTS

- Acme Mfg. Co., Philadelphia, Pa.
- Carolina Blowers Co., Inc., Greensboro, N. C.
- Corbman Bros., Inc., Philadelphia, Pa.
- Corbman Bros., Inc., Philadelphia, Pa.
- Inland Steel Products Co., Milwaukee, Wis.
- International Heater Co., Utica, N. Y.
- Waterman-Waterbury Co., Minneapolis, Minn.

CONTROLS

Blower, Speed Changing

- A-P Controls Corp., Milwaukee, Wis.
- Vol-U-Trol Co., St. Paul, Minn.
- Webster Electric Co., Racine, Wis. (Thermal)
- White Mfg. Co., St. Paul, Minn.

Combination Fan and Limit, Line or Low Voltage

- A-P Controls Corp., Milwaukee, Wis.
- Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
- Cook Electric Co., Chicago, Ill.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Detroit Lubricator Co., Detroit, Mich.
- General Controls Co., Glendale, Calif.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Standard Remote Control Valve Co., South Pasadena, Calif.
- Thermo-O-Disc, Inc., Mansfield, Ohio.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Combustion, Line or Low Voltage

- Barber-Colman Co., Rockford, Ill.
- Combustion Control Corp., Cambridge, Mass.
- Crown Controls Co., Inc., New Bremen, Ohio.
- Electronic Products Co., St. Charles, Ill. (Industrial)
- General Controls Co., Glendale, Calif.
- Hays Corp., Michigan City, Ind.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- White-Rodgers Electric Co., St. Louis, Mo.

Fan

- Allen-Bradley Co., Milwaukee, Wis.
- Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
- Barber-Colman Co., Rockford, Ill.
- Cam-Stat, Inc., Div. Paul Henry Co., Los Angeles, Calif.
- Clark Controller Co., Cleveland, Ohio.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Detroit Lubricator Co., Detroit, Mich.
- General Controls Co., Glendale, Calif.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- McCorkle Co., D. H., Berkeley, Calif.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.
- Thermo-O-Disc, Inc., Mansfield, Ohio.
- United Electric Controls Co., South Boston, Mass.
- White Mfg. Co., St. Paul, Minn. (Low).

White-Rodgers Electric Co., St. Louis, Mo.

Humidistats

- Au-Temp-Co Corp., New York, N. Y.
- Barber-Colman Co., Rockford, Ill.
- Friez Instrument Div. Bendix Aviation Corp., Baltimore, Md.
- General Controls Co., Glendale, Calif.
- H-B Instrument Co., Inc., Philadelphia, Pa.
- Johnson Service Co., Milwaukee, Wis.
- Maid-O'-Mist, Inc., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Tagliabue Instruments Div. Weston Electrical Instrument Corp., Newark, N. J.
- Taylor Instrument Cos., Rochester, N. Y.

Limit, Line or Low Voltage

- Allen-Bradley Co., Milwaukee, Wis. (Low).
- Au-Temp-Co Corp., New York, N. Y.
- Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Crown Controls Co., Inc., New Bremen, Ohio. (Low)
- Detroit Lubricator Co., Detroit, Mich.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- McCorkle Co., D. H., Berkeley, Calif.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.
- Thermo-O-Disc, Inc., Mansfield, Ohio.
- United Electric Controls Co., South Boston, Mass.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Motors, Duct Damper, Modulating or Proportioning

- Automatic Temperature Control Co., Inc., Philadelphia, Pa.
- Barber-Colman Co., Rockford, Ill.
- Bristol Co., Waterbury, Conn.
- General Blower Co., Inc., Philadelphia, Pa.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Motors, Duct Damper, Two Position

- A-P Controls Corp., Milwaukee, Wis.
- Au-Temp-Co Corp., New York, N. Y.
- Automatic Temperature Control Co., Inc., Philadelphia, Pa.
- Barber-Colman Co., Rockford, Ill.
- Bristol Co., Waterbury, Conn.
- Crown Controls Co., Inc., New Bremen, Ohio.
- General Blower Co., Inc., Philadelphia, Pa.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- White Mfg. Co., St. Paul, Minn.

Motors, Draft Damper, Electrical

- A-P Controls Corp., Milwaukee, Wis.
- Au-Temp-Co Corp., New York, N. Y.
- Automatic Temperature Control Co., Inc., Philadelphia, Pa.
- Barber-Colman Co., Rockford, Ill.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Crown Controls Co., Inc., New Bremen, Ohio.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- General Blower Co., Inc., Philadelphia, Pa.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Pilots, Gas Burner

- Ajax Thermostatic Controls Co., Gates Mills, Ohio.
- American Control Co., Compton, Calif.
- A-P Controls Corp., Milwaukee, Wis.
- Cleveland Heater Co., Cleveland, Ohio.
- Continental Instrument Co., Cleveland, Ohio.
- Detroit Lubricator Co., Detroit, Mich.
- Domestic Thermostat Co., Los Angeles, Calif.
- General Controls Co., Glendale, Calif.
- Grayson Controls Div., Robertshaw-Fulton Controls Co., Lynwood, Calif.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Grayson-Greenmyer, Inc., Monrovia, Calif.
- Jac Mfg. Co., Mt. Clemens, Mich.
- Kathe Controls, Cleveland, Ohio.
- Mercoir Corp., Chicago, Ill.
- Milwaukee Gas Specialty Co., Milwaukee, Wis.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Modern Materials, Inc., Chicago, Ill.
- Newell & Sons, Irwin, Pa.
- Patrol Valve Co., Cleveland, Ohio. (Also gas pilot filters)
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Roberts-Gordon Appliance Corp., Buffalo, N. Y.
- Robertshaw Thermostat Div. Robertshaw-Fulton Controls Co., Youngwood, Pa.
- Standard Remote Control Valve Co., Inc., South Pasadena, Calif.
- Thermo-O-Disc, Inc., Mansfield, Ohio.
- Titan Valve & Mfg. Co., Cleveland, Ohio.
- White-Rodgers Electric Co., St. Louis, Mo.
- Zink Co., John, Tulsa, Okla.

Relays, Electrical

- Allen-Bradley Co., Milwaukee, Wis.
- American Instrument Co., Inc., Silver Spring, Md.
- Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
- Au-Temp-Co Corp., New York, N. Y.
- Automatic Electric Mfg. Co., Mankato, Minn.
- Automatic Switch Co., Orange, N. J.
- Automatic Temperature Control Co., Inc., Philadelphia, Pa.
- B/W Controller Corp., Birmingham, Mich.
- Barber-Colman Co., Rockford, Ill.
- Benjamin Electric Mfg. Co., Des Plaines, Ill.
- Burke Engineering Co., Los Angeles, Calif.
- Clark Controller Co., Cleveland, Ohio.
- Cooper Co., Clark, Palmyra, N. J.
- Cramer Co., Inc., R. W., Centerbrook, Conn. (Time)
- Cutler-Hammer, Inc., Milwaukee, Wis.
- Detroit Lubricator Co., Detroit, Mich.
- Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
- Electronic Products Co., St. Charles, Ill. (Photo-electric)
- Eas Instrument Co., Bergenfield, N. J.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
- Guardian Electric Mfg. Co., Chicago, Ill.
- H-B Instrument Co., Philadelphia, Pa.
- Industrial Engineering Corp., Terre Haute, Ind.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- McCorkle Co., D. H., Berkeley, Calif.
- Mercoir Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Monitor Controller Co., Boston, Mass.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Philadelphia Thermometer Co., Philadelphia, Pa.
- Photoswitch, Inc., Cambridge, Mass.
- Precision Thermometer & Instrument Co., Philadelphia, Pa.
- Reynolds Electric Co., River Grove, Ill.
- R-S Products Corp., Philadelphia, Pa.
- Small Motors, Inc., Chicago, Ill.
- Square D Co., Detroit, Mich.
- Struthers-Dunn, Inc., Philadelphia, Pa.
- Tork Clock Co., Inc., Mount Vernon, N. Y.
- Ward Leonard Electric Co., Mt. Vernon, N. Y.
- Westinghouse Electric Corp., Pittsburgh, Pa.
- Weston Electrical Instrument Corp., Newark, N. J.
- White-Rodgers Electric Co., St. Louis, Mo.
- Zenith Electric Co., Chicago, Ill.

Switches, Magnetic

- Allen-Bradley Co., Milwaukee, Wis.
- Allis-Chalmers Mfg. Co., Milwaukee, Wis.
- Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
- Automatic Electric Mfg. Co., Mankato, Minn.
- Automatic Switch Co., Orange, N. J.
- B/W Controller Corp., Birmingham, Mich.
- Barber-Colman Co., Rockford, Ill.
- Clark Controller Co., Cleveland, Ohio.
- Cutler-Hammer, Inc., Milwaukee, Wis.
- Detroit Lubricator Co., Detroit, Mich.
- Electric Controller & Mfg. Co., Cleveland, Ohio.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
- Guardian Electric Mfg. Co., Chicago, Ill.
- H-B Instrument Co., Philadelphia, Pa.
- Hart Mfg. Co., Hartford, Conn. (Mercury Tube).
- Industrial Engineering Corp., Terre Haute, Ind.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Monitor Controller Co., Boston, Mass.

- Palmer Electric Co., Chicago, Ill.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Square D Co., Detroit, Mich.
- Struthers-Dunn, Inc., Philadelphia, Pa.
- Tork Clock Co., Inc., Mt. Vernon, N. Y.
- Trumbull Electric Mfg. Co., Plainville, Conn.
- Ward Leonard Electric Co., Mt. Vernon, N. Y.
- Westinghouse Electric Corp., Pittsburgh, Pa.
- White-Rodgers Electric Co., St. Louis, Mo.
- Zenith Electric Co., Chicago, Ill.

Switches, Manual

- Allen-Bradley Co., Milwaukee, Wis.
- Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
- B/W Controller Corp., Birmingham, Mich.
- Barber-Colman Co., Rockford, Ill.
- Burke Engineering Co., Los Angeles, Calif.
- Clark Controller Co., Cleveland, Ohio.
- Cutler-Hammer, Inc., Milwaukee, Wis.
- Dual Remote Control Co., Garden City, Mich.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
- Hart Mfg. Co., Hartford, Conn.
- Industrial Engineering Corp., Terre Haute, Ind.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Square D Co., Detroit, Mich.
- Trumbull Electric Mfg. Co., Plainville, Conn.
- Ward Leonard Electric Co., Mount Vernon, N. Y.
- Westinghouse Electric Corp., Pittsburgh, Pa.

Switches, Time

- Allen-Bradley Co., Milwaukee, Wis.
- Au-Temp-Co Corp., New York, N. Y.
- Automatic Electric Mfg. Co., Mankato, Minn.
- Automatic Temperature Control Co., Inc., Philadelphia, Pa.
- Barber-Colman Co., Rockford, Ill.
- Cooper Co., Clark, Palmyra, N. J.
- Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
- Industrial Engineering Corp., Terre Haute, Ind.
- International Register Co., Chicago, Ill.
- Landis & Gyr, Inc., New York, N. Y.
- Mercoir Corp., Chicago, Ill.
- Miller-Harris Instrument Co., Milwaukee, Wis.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Palo-Myers, Inc., New York, N. Y.
- Paragon Electric Co., Two Rivers, Wis.
- Perflex Corp., Milwaukee, Wis.
- Photoswitch, Inc., Cambridge, Mass.
- Reliance Automatic Lighting Co., Racine, Wis.
- Reynolds Electric Co., River Grove, Ill.
- Rhodes, Inc., M. H., Hartford, Conn.
- Sangamo Electric Co., Springfield, Ill.
- Telechron, Inc., Ashland, Mass.
- Tork Clock Co., Inc., Mt. Vernon, N. Y.
- Ward Leonard Electric Co., Mt. Vernon, N. Y.
- Westinghouse Electric Corp., Pittsburgh, Pa.
- White-Rodgers Electric Co., St. Louis, Mo.
- Zenith Electric Co., Chicago, Ill.

Thermostats, Clock, Day and Night

- Barber-Colman Co., Rockford, Ill.
- Crown Controls Co., Inc., New Bremen, Ohio.
- Detroit Lubricator Co., Detroit, Mich.
- General Controls Co., Glendale, Calif.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Mercoir Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perflex Corp., Milwaukee, Wis.
- Sarcoterm Controls, Inc., New York, N. Y.
- Tork Clock Co., Inc., Mt. Vernon, N. Y.
- White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Domestic Water Heater

- Ajax Thermostatic Controls Co., Gates Mills, Ohio.
- American Control Co., Compton, Calif.
- American Instrument Co., Inc., Silver Spring, Md.
- Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
- Cleveland Heater Co., Cleveland, Ohio.
- Cutler-Hammer, Inc., Milwaukee, Wis.
- Domestic Thermostat Co., Los Angeles, Calif.
- General Controls Co., Glendale, Calif.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Hart Mfg. Co., Hartford, Conn.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- Schaefer Electrical Products Co., Detroit, Mich.
- Thermo-O-Disc, Inc., Mansfield, Ohio.
- Westinghouse Electric Corp., Pittsburgh, Pa.

Thermostats, Heat Accelerated or Anticipating

- A-P Controls Corp., Milwaukee, Wis.
- Au-Temp-Co Corp., New York, N. Y.
- Barber-Colman Co., Rockford, Ill.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Crown Controls Co., Inc., New Bremen, Ohio.
- Detroit Lubricator Co., Detroit, Mich.
- Fulton Syphon Div. Robertshaw-Fulton Controls Co., Knoxville, Tenn.
- General Controls Co., Glendale, Calif.
- H-B Instrument Co., Philadelphia, Pa.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- McLarty Systems, Battle Creek, Mich.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- Sarcotherm Controls, Inc., New York, N. Y.
- Tagliabue Instruments Div. Weston Electrical Instrument Corp., Newark, N. J.
- White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Line or Low Voltage

- American Instrument Co., Inc., Silver Spring, Md.
- A-P Controls Corp., Milwaukee, Wis.
- Au-Temp-Co Corp., New York, N. Y.
- Barber-Colman Co., Rockford, Ill.
- Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Crown Controls Co., Inc., New Bremen, Ohio.
- Detroit Lubricator Co., Detroit, Mich.
- Edison, Inc., Thomas A. Instrument Div., West Orange, N. J.
- General Controls Co., Glendale, Calif.
- H-B Instrument Co., Philadelphia, Pa.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- McCorkle Co., D. H., Berkeley, Calif.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- Sarcotherm Controls, Inc., New York, N. Y.
- Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.
- Standard Remote Control Valve Co., South Pasadena, Calif.
- (Low)
- United Electric Controls Co., South Boston, Mass.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Modulating or Proportioning

- Atlas Valve Co., Newark, N. J. (Pneumatic)
- Barber-Colman Co., Rockford, Ill.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Johnson Service Co., Milwaukee, Wis.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Thermostats, Weather Compensating

- Automatic Devices Co., Inc., Weather Controls Div., Chicago, Ill.
- Barber-Colman Co., Rockford, Ill.
- Detroit Lubricator Co., Detroit, Mich.
- Heat-Timer Corp., New York, N. Y.
- Illinois Engineering Co., Chicago, Ill.
- Johnson Service Co., Milwaukee, Wis.
- Miller Heat-O-Meter Co., Milwaukee, Wis.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Sarcotherm Controls, Inc., New York, N. Y.
- United Electric Controls Co., South Boston, Mass.
- White-Rodgers Electric Co., St. Louis, Mo.

Valves, Solenoid

- Alco Valve Co., St. Louis, Mo.
- A-P Controls Corp., Milwaukee, Wis.
- Automatic Switch Co., Orange, N. J.
- Barber-Colman Co., Rockford, Ill.

- Cooper Co., Clark, Palmyra, N. J.
- Cutler-Hammer, Inc., Milwaukee, Wis.
- Davis Regulator Co., Chicago, Ill.
- Detroit Lubricator Co., Detroit, Mich.
- Electromatic Div., Simoniz Co., Chicago, Ill.
- Frick Co., Waynesboro, Pa.
- General Controls Co., Glendale, Calif. (Magnetic)
- Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.
- Hays Mfg. Co., Erie, Pa.
- Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
- Hubbell Corp., Chicago, Ill.
- Keckley Co., O. C., Chicago, Ill.
- McDonnell & Miller, Inc., Chicago, Ill.
- Maid-O'-Mist, Inc., Chicago, Ill.
- Mercoid Corp., Chicago, Ill.
- Marsh Corp., Jas. P., Skokie, Ill.
- Milwaukee Gas Specialty Co., Milwaukee, Wis.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- Pfening Co., Fred D., Columbus, Ohio.
- R-S Products Corp., Philadelphia, Pa.
- Ruggles-Klingemann Mfg. Co., Salem, Mass.
- Sarcotherm Controls, Inc., New York, N. Y.
- Sciaky Bros., Inc., Chicago, Ill.
- Skinner Electric Valve Div., Skinner Chuck Co., Norwalk, Conn.
- Sporlan Valve Co., St. Louis, Mo.
- Square D Co., Detroit, Mich.
- Supreme Electric Products Corp., Rochester, N. Y.
- White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS

Gas Burner, Complete Assembly

- Detroit Lubricator Co., Detroit, Mich.
- General Controls Co., Glendale, Calif.
- Hays Corp., Michigan City, Ind.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Mueller Furnace Co., L. J., Milwaukee, Wis. (Modulating)
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- White-Rodgers Electric Co., St. Louis, Mo.

Gravity Furnace, Hand-Fired, Complete Assembly

- A-P Controls Corp., Milwaukee, Wis.
- Barber-Colman Co., Rockford, Ill.
- Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
- Crown Controls Co., New Bremen, Ohio.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- General Controls Co., Glendale, Calif.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Heating, Ventilating, and Air Conditioning Systems, Electrical

- Barber-Colman Co., Rockford, Ill.
- Burke Engineering Co., Los Angeles, Calif.
- General Controls Co., Glendale, Calif.
- Midwest Automatic Control Co., Des Moines, Iowa.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Heating, Ventilating, and Air Conditioning Systems, Pneumatic

- Atlas Valve Co., Newark, N. J.
- Bristol Co., Waterbury, Conn.
- Foxboro Co., Foxboro, Mass.
- Johnson Service Co., Milwaukee, Wis.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Powers Regulator Co., Chicago, Ill.
- Tagliabue Corp., (N. J.), C. J., Newark, N. J.
- Taylor Instrument Cos., Rochester, N. Y.

Oil Burner, Complete Assembly

- A-P Controls Corp., Milwaukee, Wis.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Detroit Lubricator Co., Detroit, Mich.
- General Controls Co., Glendale, Calif.
- Hays Corp., Michigan City, Ind.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- Wheelco Instruments Co., Chicago, Ill.
- White-Rodgers Electric Co., St. Louis, Mo.

• Advertisement in this issue. See Index to Advertisers, page 164-D.

Stoker, Complete Assembly

- Defender Instrument & Regulator Co., St. Louis, Mo.
- Detroit Lubricator Co., Detroit, Mich.
- Hays Corp., Michigan City, Ind.
- Mercoind Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Palmer Electric Co., Chicago, Ill.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- White-Rodgers Electric Co., St. Louis, Mo.

Winter Air Conditioning Furnace, Hand Fired, Complete Assembly

- Barber-Colman Co., Rockford, Ill.
- Crown Controls Co., Inc., New Bremen, Ohio.
- General Controls Co., Glendale, Calif.
- Mercoind Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
- White Mfg. Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis, Mo.

Zone, Complete Assembly

- Au-Temp-Co Corp., New York, N. Y.
- Barber-Colman Co., Rockford, Ill.
- Burke Engineering Co., Los Angeles, Calif.
- Dole Valve Co., Chicago, Ill.
- General Controls Co., Glendale, Calif.
- Mercoind Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

COOLING COILS

See Coils, Cooling

COPPERS, SOLDERING

- Acme Electric Heating Co., Inc., Boston, Mass. (Electric)
- American Brass Co., Waterbury, Conn.
- Bernz Co., Otto, Rochester, N. Y.
- Bomas Mfg. Co., Binghamton, N. Y.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
- Dual Remote Control Co., Garden City, Mich. (Electric)
- Electric Soldering Iron Co., Inc., Deep River, Conn. (Electric)
- Everhot Mfg. Co., Maywood, Ill.
- General Electric Co., Schenectady, N. Y. (Electric)
- Hexacon Electric Co., Roselle Park, N. J. (Electric)
- Hussey & Co., C. G., Pittsburgh, Pa.
- Ideal Industries, Inc., Sycamore, Ill.
- Imperial Brass Mfg. Co., Chicago, Ill. (Air-acetylene)
- Insto-Gas Corp., Detroit, Mich. (Gas)
- Kemode Mfg. Co., New York, N. Y. (Cartridge heated)
- Kwikheat Mfg. Co., Glendale, Calif. (Electric)
- Lenk Mfg. Co., Boston, Mass. (Electric)
- Linde Air Products Co., New York, N. Y.
- Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
- Min-Kota Foundry & Mfg. Co., Fargo, N. Dak.
- Nelpin Mfg. Co., Long Island City, N. Y. (Feeding attachment)
- Ransome Co., Emeryville, Calif. (Gas)
- Reiner & Campbell Co., Inc., Newark, N. J.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sight Feed Generator Co., West Alexandria, Ohio.
- Stanley Tools, New Britain, Conn.
- Torrit Mfg. Co., St. Paul, Minn.
- Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric)
- Weiss & Co., H., New York, N. Y.

CRANES, OVERHEAD TRAVELING, HAND AND POWER

- American MonoRail Co., Cleveland, Ohio.
- Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
- Chicago Tramrail Co., Chicago, Ill.
- Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Tonawanda, N. Y.
- Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.
- Detroit Hoist & Machine Co., Detroit, Mich.
- Euclid Crane & Hoist Co., Euclid, Ohio.
- Harnischfeger Corp., Milwaukee, Wis. (Electric)
- Louden Machinery Co., Fairfield, Iowa.
- Reading Chain & Block Corp., Reading, Pa.
- Richards-Wilcox Mfg. Co., Aurora, Ill.
- Robbins & Myers, Inc., Springfield, Ohio.
- Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

- Whiting Corp., Harvey, Ill.
- Wright Hoist Div., American Chain & Cable Co., York, Pa.

CRIMPING MACHINES

See Machines, Crimping

DAMPER, DUCT, REGULATOR SETS

See Regulators, Duct Damper Sets

DAMPER MOTORS

See Controls, Motors

DAMPERS, BACK DRAFT

See Louvers and Shutters

DAMPERS

Draft, Barometric

- Atlas Utilities Co., Inc., Providence, R. I.
- Atlas Valve Co., Newark, N. J.
- Barber-Colman Co., Rockford, Ill.
- Boston Machine Works Co., Lynn, Mass.
- Breese Burners, Inc., Santa Fe, N. Mex.
- Campbell Engineering Co., Appleton, Wis.
- Cole-Sewell Engineering Co., St. Paul, Minn.
- Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Empire Ventilation Equipment Co., Long Island City, N. Y.
- Field Control Div., H. D. Conkey & Co., Mendota, Ill.
- Herd Utilities, Inc., Providence, R. I. (Thermostatic)
- Hotstream Heater Co., Cleveland, Ohio
- James Regulator Co., Inc., Hamburg, Pa.
- Krueger Sentry Gauge Co., Green Bay, Wis.
- Perfex Corp., Milwaukee, Wis.
- Preferred Utilities Mfg. Corp., New York, N. Y.
- Simplex Mfg. Co., Fond du Lac, Wis.
- Skuttle Mfg. Co., Detroit, Mich.
- Walker Mfg. & Sales Corp., St. Joseph, Mo.

Smoke Pipe

- Adams Co., Dubuque, Iowa.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Corbman Bros., Inc., Philadelphia, Pa.
- Eselgroth & Co., Newark, N. J.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Griswold Mfg. Co., Erie, Pa.
- Hotstream Heater Co., Cleveland, Ohio.
- Howes-Woods Co., Cambridge, Mass.
- Keith Furnace Co., Des Moines, Iowa.
- Maple City Furnace Co., Moonmouth, Ill.
- Marshall Furnace Co., Marshall, Mich.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Peerless Foundry Co., Indianapolis, Ind.
- Preferred Utilities Mfg. Corp., New York, N. Y.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- United States Register Co., Battle Creek, Mich.
- Walker Mfg. & Sales Corp., St. Joseph, Mo.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Williamson Heater Co., Cincinnati, Ohio.

Stuck Head

- Acme Furnace Fitting Co., Chicago, Ill.
- Acme Mfg. Co., Philadelphia, Pa.
- Aire Flow Furnace Pipe Co., Detroit, Mich.
- Air Control Products, Inc., Coopersville, Mich.
- Barber-Colman Co., Rockford, Ill.
- Corbman Bros., Inc., Philadelphia, Pa.
- Henry Furnace Co., Medina, Ohio.
- Inland Steel Products Co., Milwaukee, Wis.
- Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
- Truscon Steel Co., Youngstown, Ohio.

Warm Air Pipe

- Acme Furnace Fitting Co., Chicago, Ill.
- Acme Mfg. Co., Philadelphia, Pa.
- Aire Flow Furnace Pipe Co., Detroit, Mich.
- Adams Co., Dubuque, Iowa.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Corbman Bros., Inc., Philadelphia, Pa.
- Excelsior Steel Furnace Co., Chicago, Ill.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Inland Steel Products Co., Milwaukee, Wis.
- Lennox Furnace Co., Marshalltown, Iowa.
- Marshall Furnace Co., Marshall, Mich.
- May-Fieberger Co., Newark, Ohio.
- Peerless Foundry Co., Indianapolis, Ind.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- United States Register Co., Battle Creek, Mich.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Williamson Heater Co., Cincinnati, Ohio.
- Young Regulator Co., Cleveland, Ohio.

DEHUMIDIFIERS, ABSORPTION AND ADSORPTION

- Air and Refrigeration Corp., New York, N. Y.
- Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Adsorption)
- Carbide and Carbon Chemicals Div. Union Carbide & Chemical Corp., New York, N. Y. (Triethylene glycol)
- Carrier Corp., Syracuse, N. Y.
- Daly, Merritt & Sullivan, Inc., Falls Church, Va.
- Davison Chemical Corp., Baltimore, Md.
- Floridin Co., Warren, Pa.
- Kaufman Co., H. J., Detroit, Mich. (Absorption)
- Pittsburgh Electrodryer Corp., Pittsburgh, Pa.
- Rodgers Diesel & Air Craft Corp., New York, N. Y.
- Socony-Vacuum Oil Co., New York, N. Y.
- Solvay Sales Div., Allied Chemical & Dye Corp., New York, N. Y.
- Surface Combustion Corp., Toledo, Ohio.
- Tamm Industries Inc., Chicago, Ill.
- York Corp., York, Pa.

DIES

See Presses and Dies

DIFFUSERS, AIR, HIGH VELOCITY

- A-J Mfg. Co., Kansas City, Mo.
- Air Control Products, Inc., Coopersville, Mich.
- Air Devices, Inc., New York, N. Y.
- Airfan Engineering Co., Los Angeles, Calif.
- Aladdin Heating Corp., Oakland, Calif.
- Anemostat Corp. of America, New York, N. Y.
- Barber-Colman Co., Rockford, Ill.
- Connor Engineering Corp., W. B., New York, N. Y.
- Demuth & Sons, Inc., Charles, Mineola, L. I., N. Y.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Pyle-National Co., Multi-Vent Div., Chicago, Ill. (Low velocity discharge)
- Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
- Tuttle & Bailey, Inc., New Britain, Conn.
- Wilster, Inc., Cleveland, Ohio.

DOWNSPOUTING AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor

DRAFT DIVERTERS, GAS HEATER

- Acme Mfg. Co., Philadelphia, Pa.
- Adelta Mfg. Co., Inc., Philadelphia, Pa.
- Balloonoff Metal Products Co., Cleveland, Ohio. (Vertical)
- Banner Burner Co., Youngstown, Ohio.
- Bastian-Morley Co., Inc., LaPorte, Ind.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Cleveland Heater Co., Cleveland, Ohio.
- Cramer Mfg. Co., Canton, Ohio. (Horizontal)
- Famous Furnace Co., Cleveland, Ohio.
- Finger, Joe, Cleveland, Ohio. (Hoods)
- H&H Research Co., Detroit, Mich. (Electric reciprocating for filing, sawing, scraping, etc.)
- Hotstream Heater Co., Cleveland, Ohio.
- Inland Steel Products Co., Milwaukee, Wis.
- Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
- Maysteel Products, Inc., Milwaukee, Wis.
- Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Tri-State Heating Supply, Inc., Fort Wayne, Ind.
- Waverly Heating Supply Co., Boston, Mass.
- Wilder Mfg. Co., Niles, Ohio.
- Wilder Products Co., Springfield, Ohio.

DRAFT GAUGES

See Gauges, Draft

DRAFT REGULATORS

See Regulators, Furnace Draft, Mechanical; Dampers, Draft, Barometric; Controls

DRILLS, ELECTRIC AND PNEUMATIC, PORTABLE

- Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic)
- Albertson & Co., Inc., Sioux City, Iowa.
- Black & Decker Mfg. Co., Towson, Md. (Electric)

- Buckeye Tools Corp., Dayton, Ohio. (Pneumatic)
- Chicago Pneumatic Tool Co., New York, N. Y.
- Chicago Precision Machine Co., Chicago, Ill.
- Clark, Jr., Electric Co., Jas., Louisville, Ky.
- DeSoto Oil Burner Co., York, Pa. (Electric)
- Independent Pneumatic Tool Co., Aurora, Ill. (Electric & pneumatic)
- Ingersoll-Rand Co., New York, N. Y. (Pneumatic)
- Keller Tool Co., Grand Haven, Mich. (Pneumatic)
- Mall Tool Co., Chicago, Ill. (Electric)
- Millers Falls Co., Greenfield, Mass.
- Misener Mfg. Co., Inc., Syracuse, N. Y.
- Portable Electric Tools, Inc., Chicago, Ill. (Electric)
- Rotor Tool Co., Cleveland, Ohio. (Pneumatic)
- Signal Electric Mfg. Co., Menominee, Mich. (Electric)
- Skilsaw, Inc., Chicago, Ill. (Electric & pneumatic)
- Small Motors, Inc., Chicago, Ill. (Electric)
- Snap-on Tools Corp., Kenosha, Wis.
- Speedway Mfg. Co., Cicero, Ill.
- Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
- Stow Mfg. Co., Binghamton, N. Y. (Electric-flexible shaft)
- Syntron Co., Homer City, Pa. (Electric)
- Tempo Products Co., Cleveland, Ohio. (Powder operated)
- United States Electrical Tool Co., Cincinnati, Ohio. (Electric)
- Van Dorn Electric Tool Co., Towson, Md.
- Wodack Electric Tool Corp., Chicago, Ill. (Electric)
- York Electric & Machine Co., York, Pa. (Electric)

DRIVE CLEATS

See Connectors, Metal, for Metal Dies

DRYERS, CORN, FURNACE TYPE

- Campbell Heating Co., Des Moines, Iowa.
- Jackson & Church Co., Saginaw, Mich.
- Link-Belt Co., Chicago, Ill.

DUCT CONNECTORS

See Connectors, Duct, Flexible

DUCT INSULATION

See Insulation, Duct

DUCT TURNING VANES

See Vanes, Duct Turning

DUCTS AND DUCT FITTINGS, PREFABRICATED

Metal

- Acet & Whedon, Inc., Medina, N. Y.
- Acme Mfg. Co., Philadelphia, Pa.
- Adelta Mfg. Co., Inc., Philadelphia, Pa.
- Aire Flow Furnace Pipe Co., Detroit, Mich.
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Champion Furnace Pipe Co., Peoria, Ill.
- Chandler Co., Cedar Rapids, Iowa.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Chicago Furnace Supply Co., Chicago, Ill.
- Clayton & Lambert Mfg. Co., Louisville, Ky.
- Corbman Bros., Inc., Philadelphia, Pa.
- Detroit Safety Furnace Pipe Co., Detroit, Mich.
- Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
- Excelsior Steel Furnace Co., Chicago, Ill.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- General Corp., Minneapolis, Minn.
- Grand Island Furnace & Supply Co., Grand Island, Nebr.
- Gray Metal Products, Inc., Rochester, N. Y.
- Henry Furnace Co., Medina, Ohio.
- Hendall, A. M., Morris, Ill.
- Howes-Woods Co., Cambridge, Mass.
- International Products Co., Milwaukee, Wis.
- International Heater Co., Utica, N. Y.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Made-Rite Co., Inc., Newport, Ky.
- Marshall Furnace Co., Marshall, Mich.
- Meyer & Bro. Co., Peoria, Ill.
- Moncrief Furnace Co., Atlanta, Ga.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Northwest Metal Products, Inc., Seattle, Wash.
- Norwalk Air Conditioning Corp., South Norwalk, Conn.
- Republic Rubber Div. Lee Rubber & Tire Corp., Youngstown, Ohio. (Rubber)
- Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
- Schecter Bros. Co., Philadelphia, Pa.
- Sioux Steel Co., Sioux Falls, S. D.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Standard Furnace Supply Co., Omaha, Nebr.
- Superior Safety Furnace Pipe Co., Detroit, Mich.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tri-State Heating Supply, Inc., Fort Wayne, Ind.
- United Industries, Madison, Wis. (Duct hangers for precast concrete joists only)
- United States Register Co., Battle Creek, Mich.
- Viking Mfg. Corp., Cleveland, Ohio. (Aluminum)
- Waterman-Waterbury Co., Minneapolis, Minn.
- Waverly Heating Supply Co., Boston, Mass.
- Williamson Heater Co., Cincinnati, Ohio.
- Youngstown Furnace Co., Youngstown, Ohio.

Non-Metallic

- Cannelton Sewer Pipe Co., RadianTile Div., Cannelton, Ind. (Floor tile)
- Carey Mfg. Co., Philip, Cincinnati, Ohio.
- duPont de Nemours & Co., Inc., E. I., Wilmington, Del. (Rubberized tubing)
- Flexible Tubing Corp., Guilford, Conn. (Fabric)
- Harvey-Whipple, Inc., Springfield, Mass.
- Johns-Manville, New York, N. Y.
- Kearney Co., Robt. A., New York, N. Y.
- Sall Mountain Co., Chicago, Ill.
- United States Rubber Co., New York, N. Y.

DUST COLLECTORS

See Collectors, Blow Pipe

EAVES TROUGH AND FITTINGS

See Gutters; Fittings and Accessories, Gutter

ELBOW MACHINES

See Machines, Elbow

ELECTRIC WELDERS

See Welders

ELECTRODES, WELDING

- Acme Electric Welder Co., Los Angeles, Calif. (Spot)
- Air Reduction Sales Co., New York, N. Y.
- All-State Welding Alloys Co., Inc., White Plains, N. Y.
- Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
- Aluminum Co. of America, Pittsburgh, Pa.
- American Agile Corp., Cleveland, Ohio.
- American Brass Co., Waterbury, Conn.
- Arcos Corp., Philadelphia, Pa.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Electric Arc, Inc., Newark, N. J.
- Eutectic Welding Alloys Corp., New York, N. Y.
- General Electric Co., Schenectady, N. Y.
- Harnischfeger Corp., Milwaukee, Wis.
- Hobart Bros. Co., Troy, Ohio.
- Hollup Corp. Div., National Cylinder Gas Co., Chicago, Ill.
- International Nickel Co., Inc., New York, N. Y.
- Lincoln Electric Co., Cleveland, Ohio.
- McKay Co., Pittsburgh, Pa.
- Marquette Mfg. Co., Inc., Minneapolis, Minn.
- Metal & Thermit Corp., New York, N. Y.
- National Carbon Co., Inc., New York, N. Y.
- National Cylinder Gas Co., Chicago, Ill.
- Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
- Sight Feed Generator Co., West Alexandria, Ohio.
- Smith Corp., A. O., Milwaukee, Wis.
- Taylor-Winfield Corp., Warren, Ohio.
- Trindl Products, Ltd., Chicago, Ill.
- Tweco Products Co., Wichita, Kans. (Holders)
- Universal Welder Corp., Cleveland, Ohio.
- Welding Sales & Engineering Co., Detroit, Mich.
- Westinghouse Electric Corp., Pittsburgh, Pa.

EXHAUSTERS, WELDING FUME

- Airfan Engineering Co., Los Angeles, Calif.
- American Machine Products Co., Marshalltown, Iowa.
- Ammerman Co., C. L., Minneapolis, Minn.
- Babbitt, Inc., New York, N. Y. (Mill)
- Champion Blower & Forge Co., Lancaster, Pa.
- Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
- Chicago Blower Corp., Chicago, Ill.
- Coppus Engineering Corp., Worcester, Mass.
- Dana Fan & Blower Corp., Cincinnati, Ohio.
- Day Co., Minneapolis, Minn.
- Despatch Oven Co., Minneapolis, Minn.
- General Blower Co., Morton Grove, Ill.
- Jenn Air Products Co., Indianapolis, Ind.

- Kirk & Blum Mfg. Co., Cincinnati, Ohio.
- Kloppenborg Aluminum Foundry, Davenport, Iowa.
- Martin Fan & Blower Co., Chicago, Ill.
- Ruemelin Mfg. Co., Milwaukee, Wis.
- Toritt Mfg. Co., St. Paul, Minn.
- Trade-Wind Motors, Inc., Los Angeles, Calif.
- Utility Appliance Corp., Los Angeles, Calif.
- Wind-Way Fan & Ventilator Co., New Orleans, La.

EXPANSION BOLTS

See Bolts, Expansion

FACES, COLD AIR

Metal

- Acme Mfg. Co., Philadelphia, Pa.
- A-J Mfg. Co., Kansas City, Mo.
- Air Control Products, Inc., Coopersville, Mich.
- American-Foundry & Furnace Co., Bloomington, Ill.
- Auer Register Co., Cleveland, Ohio.
- Barber-Colman Co., Rockford, Ill.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Best Register Co., Milwaukee, Wis.
- Controlair Mfg. Co., Los Angeles, Calif.
- Diamond Mfg. Co., Wyoming, Pa.
- Greenberg's Sons, M., San Francisco, Calif.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Hendrick Mfg. Co., Carbondale, Pa.
- Independent Register Co., Cleveland, Ohio.
- Lima Register Co., Lima, Ohio.
- Midco Register Corp., St. Paul, Minn.
- Mundt & Sons, Charles, Jersey City, N. J.
- Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
- Rock Island Register Co., Rock Island, Ill.
- Stewart Mfg. Co., Cedar Grove, N. J.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tuttle & Bailey, Inc., New Britain, Conn.
- United States Register Co., Battle Creek, Mich.

Wood

- Marsh Lumber Co., Inc., Dover, Ohio.
- United States Register Co., Battle Creek, Mich.

FAN CONTROLS

See Controls

FAN-FILTER UNITS, PROPELLER TYPE, WARM AIR FURNACE

- Air Controls, Inc., Cleveland, Ohio.
- Mellish & Murray Co., Chicago, Ill.
- Peerless Electric Co., Warren, Ohio.
- Utility Appliance Corp., Los Angeles, Calif.

FAN HOUSINGS

See Housings, Blower and Fan

FANS, PROPELLER TYPE

Axial Flow

- Aerovent Fan Co., Piqua, Ohio.
- American Blower Corp., Detroit, Mich.
- Buffalo Forge Co., Buffalo, N. Y.
- Chicago Blower Corp., Chicago, Ill.
- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
- Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
- Ilg Electric Ventilating Co., Chicago, Ill.
- International Engineering, Inc., Dayton, Ohio.
- Joy Mfg. Co., Pittsburgh, Pa.
- Moore Co., Marceline, Mo.
- Robbins & Myers, Inc., Springfield, Ohio.
- South Bend Air Products, Inc., South Bend, Ind.
- Thermo-Aire Division, Evans Products Co., Plymouth, Mich.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Wing Mfg. Co., L. J., New York, N. Y.

Booster, Cold Air Return

- Advance Aluminum Castings Corp., Chicago, Ill.
- Bern's Mfg. Co., Chicago, Ill.
- Brumme Mfg. Co., Bloomington, Ill.
- Calimode, Inc., Atlanta, Ga.
- Cary Mfg. Co., Wausau, Wis.
- General Blower Co., Inc., Philadelphia, Pa.
- International Engineering, Inc., Dayton, Ohio.
- Joy Mfg. Co., Pittsburgh, Pa.
- McLarty Systems, Battle Creek, Mich.
- Martin Fan & Blower Co., Chicago, Ill.
- Mauer Engineering, Evanston, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Peerless Electric Co., Warren, Ohio.
- Robbins & Myers, Inc., Springfield, Ohio.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Western Engineering & Mfg. Co., Los Angeles, Calif.

Booster, One-Pipe Warm Air

- Advance Aluminum Castings Corp., Chicago, Ill.
- Brumme Mfg. Co., Bloomington, Ill.
- Champion Blower & Forge Co., Lancaster, Pa.
- Dual-Air Fan Corp., South Elgin, Ill.
- Heat Hustler Co., Bloomington, Ill.
- McLarty Systems, Battle Creek, Mich.
- Martin Fan & Blower Co., Chicago, Ill.
- Mauer Engineering, Evanston, Ill.
- Robbins & Myers, Inc., Springfield, Ohio.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Victor Electric Products, Inc., Cincinnati, Ohio.
- Western Engineering & Mfg. Co., Los Angeles, Calif.

Furnace, Propeller Type

- Air Controls, Inc., Cleveland, Ohio.
- Brumme Mfg. Co., Bloomington, Ill.
- Corlett-Turner Co., Chicago, Ill.
- Dual-Air Fan Corp., South Elgin, Ill.
- Ilg Electric Ventilating Co., Chicago, Ill.
- Joy Mfg. Co., Pittsburgh, Pa.
- Martin Fan & Blower Co., Chicago, Ill.
- Meier Electric & Machine Co., Inc., Indianapolis, Ind.
- Peerless Electric Co., Warren, Ohio.
- Robbins & Myers, Inc., Springfield, Ohio.

Kitchen Exhaust

- Airecon Industries, Detroit, Mich.
- Airmaster Corp., Chicago, Ill.
- American Blower Corp., Detroit, Mich.
- Arex Co., Chicago, Ill.
- Bar-Brook Mfg. Co., Inc., Shreveport, La.
- Bern's Mfg. Co., Chicago, Ill.
- Bishop & Babcock Mfg. Co., Cleveland, Ohio.
- Broan Mfg. Co., Inc., Milwaukee, Wis.
- Buffalo Forge Co., Buffalo, N. Y.
- C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
- Carey Mfg. Co., Philip, Cincinnati, Ohio.
- Central States Mfg. Co., Inc., Arkansas City, Kans.
- Champion Blower & Forge Co., Lancaster, Pa.
- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Clarage Fan Co., Kalamazoo, Mich.
- Comfort Products Corp., Dallas, Texas.
- Commercialaire, Inc., Brooklyn, N. Y.
- Crane Co., Chicago, Ill.
- Dana Fan & Blower Corp., Cincinnati, Ohio.
- Diehl Mfg. Co., Somerville, N. J.
- Dual-Air Fan Corp., South Elgin, Ill.
- Electrovent Corp., Detroit, Mich.
- Electrovent Fan & Mfg. Co., Chicago, Ill.
- Emerson Electric Mfg. Co., St. Louis, Mo.
- Fasco Industries, Inc., Rochester, N. Y.
- Falkins, Inc., Edward, Chicago, Ill.
- Gallagher Co., Owatonna, Minn. & Omaha, Nebr.
- Hunter Fan & Ventilating Co., Memphis, Tenn.
- Ilg Electric Ventilating Co., Chicago, Ill.
- Jenn Air Products Co., Indianapolis, Ind.
- Johnson Fan & Blower Corp., Chicago, Ill.
- King Co., Owatonna, Minn.
- Kloppenborg Aluminum Foundry, Davenport, Iowa.
- Kool Air Engineering Co., San Bernardino, Calif.
- Lau Blower Co., Dayton, Ohio.
- Martin Fan & Blower Co., Chicago, Ill.
- Marvin Mfg. Co., Los Angeles, Calif.
- Meyer Mfg. Co., Detroit, Mich.
- Myers Electric Co., Inc., Pittsburgh, Pa.
- National Appliance Co., Detroit, Mich.
- National Gas Equipment Co., Inc., Terrell, Texas.
- New York Blower Co., Chicago, Ill.
- Peerless Electric Co., Warren, Ohio.
- Pryne & Co., Inc., Pomona, Calif.
- Roto-Beam Div., Peerless of America, Inc., Chicago, Ill.
- Schwitzer-Cummins Co., Indianapolis, Ind.
- Scott-Newcomb, Inc., St. Louis, Mo.
- Signal Electric Mfg. Co., Menominee, Mich.
- Simpson Screen Co., Oakland, Calif.
- Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
- Sprouse Co., Inc., V. E., Columbus, Ind.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Stewart Mfg. Co., Indianapolis, Ind.
- Trade-Wind Motorfans, Inc., Los Angeles, Calif.
- Universal Blower Co., Birmingham, Mich.

- Victor Electric Products, Inc., Cincinnati, Ohio.
- Ward Industries, Inc., Edgar T., Chicago, Ill.
- West Wind Corp., Seattle, Wash.
- Western Blower Co., Seattle, Wash.
- Westinghouse Electric Corp., Pittsburgh, Pa.

Night Air Cooling

- Acme Equipment Co., Muskogee, Okla.
- Air Controls, Inc., Cleveland, Ohio.
- Air Equipment Co., Inc., Chicago, Ill.
- Airecon Industries, Detroit, Mich.
- Airmaster Corp., Chicago, Ill.
- Allen Ventilator Div. Production Planning Co., Rochester, Mich.
- Alton Mfg. Co., Dallas, Texas.
- American Blower Corp., Detroit, Mich.
- American Coolair Corp., Jacksonville, Fla.
- American Metal Products Co., Fort Worth, Texas.
- Arlington Electric Co., St. Louis, Mo.
- Bar-Brook Mfg. Co., Inc., Shreveport, La.
- Belter Electric Mfg. Co., G. J., St. Louis, Mo.
- Bern's Mfg. Co., Chicago, Ill.
- Brundage Co., Kalamazoo, Mich.
- Buffalo Forge Co., Buffalo, N. Y.
- C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
- Carey Mfg. Co., Philip, Cincinnati, Ohio.
- Champion Blower & Forge Co., Lancaster, Pa.
- Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
- Chicago Blower Corp., Chicago, Ill.
- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Cirklair Products Div. Folsom Co., Inc., Dallas, Texas.
- Climax Machinery Co., Indianapolis, Ind.
- Dana Fan & Blower Corp., Cincinnati, Ohio.
- Dearborn Stove Co., Dallas, Texas.
- De Bothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.
- Diehl Mfg. Co., Somerville, N. J.
- Dual-Air Fan Corp., South Elgin, Ill.
- Earl Co., Warren, Houston, Texas.
- Electrovent Fan & Mfg. Co., Chicago, Ill.
- Emerson Electric Mfg. Co., St. Louis, Mo.
- Fresh Air Circulator Co., Houston, Texas.
- Fresh-Aire Co., Chicago, Ill.
- General Blower Co., Inc., Philadelphia, Pa.
- Great National Air Conditioning Corp., Oklahoma City, Okla.
- Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
- Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
- Hunter Fan & Ventilating Co., Memphis, Tenn.
- Ilg Electric Ventilating Co., Chicago, Ill.
- International Engineering, Inc., Dayton, Ohio.
- International Oil Burner Co., St. Louis, Mo.
- Johnson Fan & Blower Corp., Chicago, Ill.
- Jordan & Co., Inc., Paul R., Indianapolis, Ind.
- King Co., Owatonna, Minn.
- Lakewood Engineering & Mfg. Co., Chicago, Ill.
- Lau Blower Co., Dayton, Ohio.
- Martin Fan & Blower Co., Chicago, Ill.
- Meier Electric & Machine Co., Inc., Indianapolis, Ind.
- National Gas Equipment Co., Inc., Terrell, Texas.
- Nelson, Herman, Div. American Air Filter Co., Moline, Ill.
- New York Blower Co., Chicago, Ill.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Peerless Electric Co., Warren, Ohio.
- Reed Unit-Fans, Inc., New Orleans, La.
- Robbins & Myers, Inc., Springfield, Ohio.
- Roto-Beam Div., Peerless of America, Chicago, Ill.
- Schwitzer-Cummins Co., Indianapolis, Ind.
- Seco-Lite Mfg. Co., St. Louis, Mo.
- South Bend Air Products, Inc., South Bend, Ind.
- Sprouse Co., Inc., V. E., Columbus, Ind.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Stonewall Co., Chicago, Ill.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Victor Electric Products, Inc., Cincinnati, Ohio.
- Viking Air Conditioning Corp., Cleveland, Ohio.
- Ward Industries, Inc., Edgar T., Chicago, Ill.
- Western Blower Co., Seattle, Wash.
- Wind-Way Ventilator Co., New Orleans, La.

Ventilating System (Capacity 4,000 cfm up)

- Acme Equipment Co., Muskogee, Okla.
- Aerovent Fan Co., Piqua, Ohio.
- Air Controls, Inc., Cleveland, Ohio.
- Air Equipment Co., Inc., Chicago, Ill.
- Airfan Engineering Co., Los Angeles, Calif.
- Airmaster Corp., Chicago, Ill.
- Allen Ventilator Div. Production Planning Co., Rochester, Mich.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

American Blower Corp., Detroit, Mich.
 American Coolair Corp., Jacksonville, Fla.
 Annuman Co., C. L., Minneapolis, Minn.
 Arex Co., Chicago, Ill.
 Arlington Electric Co., St. Louis, Mo.
 Babbitt, Inc., New York, N. Y.
 Bar-Brook Mfg. Co., Inc., Shreveport, La.
 Belter Electric Mfg. Co., G. J., St. Louis, Mo.
 Bern's Mfg. Co., Chicago, Ill.
 Bishop & Babcock Mfg. Co., Cleveland, Ohio.
 Bishop Co., R. H., Champaign, Ill.
 Buffalo Forge Co., Buffalo, N. Y.
 C. & H. Air Conditioning Fan Co., Inc., Atlanta, Ga.
 Campbell Heating Co., E. K., Kansas City, Mo.
 Carey Mfg. Co., Philip, Cincinnati, Ohio.
 Century Fan & Ventilator Co., Stamford, Conn.
 Champion Blower & Forge Co., Lancaster, Pa.
 Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
 Chicago Blower Corp., Chicago, Ill.
 Chicago Fan & Fin Coil Co., Chicago, Ill.
 Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
 Cirklair Products Div., Folsom Co., Inc., Dallas, Texas.
 • Clavage Fan Co., Kalamazoo, Mich.
 Climax Machinery Co., Indianapolis, Ind.
 Commercialaire, Inc., Brooklyn, N. Y.
 Coppus Engineering Corp., Worcester, Mass.
 Dana Fan & Blower Corp., Cincinnati, Ohio.
 De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
 De Vilbiss Co., Toledo, Ohio.
 Diehl Mfg. Co., Somerville, N. J.
 Dual-Air Fan Corp., South Elgin, Ill.
 Earl Co., Warren, Houston, Texas.
 Electrovent Fan & Mfg. Co., Chicago, Ill.
 • Emerson Electric Mfg. Co., St. Louis, Mo.
 Ford Blow Pipe & Mfg. Co., Memphis, Tenn.
 Fresh'nd-Aire Co., Chicago, Ill.
 Gallaher Co., Owatonna, Minn. & Omaha, Nebr.
 Garden City Fan Co., Chicago, Ill.
 General Blower Co., Morton Grove, Ill.
 Goettl Bros., Phoenix, Ariz.
 Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
 Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
 Holden Fan Co., Detroit, Mich.
 Hunter Fan & Ventilating Co., Memphis, Tenn.
 Iig Electric Ventilating Co., Chicago, Ill.
 International Engineering, Inc., Dayton, Ohio.
 • International Oil Burner Co., St. Louis, Mo.
 Johnson Fan & Blower Corp., Chicago, Ill.
 Jordan & Co., Inc., Paul R., Indianapolis, Ind.
 Joy Mfg. Co., Pittsburgh, Pa.
 King Co., Owatonna, Minn.
 Kisco Co., Inc., St. Louis, Mo.
 Kloppenborg Aluminum Foundry, Davenport, Iowa.
 Lakewood Engineering & Mfg. Co., Chicago, Ill.
 • Lau Blower Co., Dayton, Ohio.
 Marathon Electric Mfg. Corp., Wausau, Wis.
 Martin Fan & Blower Co., Chicago, Ill.
 Meier Electric & Machine Co., Inc., Indianapolis, Ind.
 Moore Co., Marceline, Mo.
 Mountain States Equipment Co., Denver, Colo.
 Murray Co. of Texas, Inc., Dallas, Texas.
 Myers Electric Co., Inc., Pittsburgh, Pa.
 National Gas Equipment Co., Inc., Terrell, Texas.
 Nelson, Herman, Div. American Air Filter Co., Moline, Ill.
 New York Blower Co., Chicago, Ill.
 Palmer Mfg. Corp., Phoenix, Ariz.
 • Peerless Electric Co., Warren, Ohio.
 Phelps Mfg. Co., Little Rock, Ark.
 Reed Unit-Fans, Inc., New Orleans, La.
 Reynolds Electric Co., River Grove, Ill.
 Robbins & Myers, Inc., Springfield, Ohio.
 Roto-Beam Div., Peerless of America, Inc., Chicago, Ill.
 Schwitzer-Cummins Co., Indianapolis, Ind.
 Seco-Lite Mfg. Co., St. Louis, Mo.
 Signal Electric Mfg. Co., Menominee, Mich.
 Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
 South Bend Air Products, Inc., South Bend, Ind.
 Sproule Co., Inc., V. E., Columbus, Ind.
 Standard Electric Mfg. Co., Inc., West Berlin, N. J.
 Trade-Wind Motorfans, Inc., Los Angeles, Calif.
 Trane Co., LaCrosse, Wis.
 Trufo Fan Co., Harmony, Pa.
 Uno Ventilator Co., Saugus, Mass.
 U. S. Air Conditioning Corp., Minneapolis, Minn.
 • Viking Air Conditioning Corp., Cleveland, Ohio.
 Ward Industries Inc., Edgar T., Chicago, Ill.

Western Blower Co., Seattle, Wash.
 • Western Engineering & Mfg. Co., Los Angeles, Calif.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Wind-Way Fan & Ventilator Co., New Orleans, La.
 Wing Mfg. Co., L. J., New York, N. Y.

FASTENINGS, SHEET METAL

Camloc Fastener Corp., New York, N. Y.
 Cuyahoga Spring Co., Cleveland, Ohio.
 Devices, Inc., New York, N. Y. (Surface anchors)
 Diamond Expansion Bolt Co., Inc., Garwood, N. J.
 Friedley-Voshardt Co., Chicago, Ill.
 Shakeproof, Inc., Chicago, Ill.
 South Chester Corp., Philadelphia, Pa.
 Star Expansion Bolt Co., New York, N. Y.
 Stic-Klip Mfg. Co., Cambridge, Mass.
 Tinnerman Products, Inc., Cleveland, Ohio.
 United-Carr Fastener Corp., Cambridge, Mass. (Studs, receptacles, clips, special nuts, etc.).

FELT, ROOFING

Barber Co., Inc., Philadelphia, Pa.
 Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
 Carey Mfg. Co., Philip, Cincinnati, Ohio.
 Certain-teed Products Corp., Ardmore, Pa.
 Detroit Steel Products Co., Detroit, Mich.
 Flintkote Co., New York, N. Y.
 Globe Roofing Products Co., Inc., Whiting, Ind.
 Johns-Manville, New York, N. Y.
 Koppers Co., Inc., Pittsburgh, Pa. (Tarred)
 Lebon Co., Chicago, Ill.
 Lexington Supply Co., Cleveland, Ohio.
 National Mfg. Corp., Tonawanda, N. Y.
 Ohio Paper Co., Miamisburg, Ohio.
 • Owens-Corning Fiberglass Corp., Toledo, Ohio.
 Proie & Coogan Heating Co., Pittsburgh, Pa.
 Reilly Tar & Chemical Corp., Indianapolis, Ind.
 Ruberoid Co., New York, N. Y.

FILTERS, AIR

Automatic

Air & Refrigeration Corp., New York, N. Y.
 Air Stream Filter Corp., St. Louis, Mo.
 • American Air Filter Co., Inc., Louisville, Ky.
 Continental Air Filters, Inc., Louisville, Ky.
 Day Co., Minneapolis, Minn.
 Dollinger Corp., Rochester, N. Y.
 Farr Co., Los Angeles, Calif.

Cleanable

Air Devices, Inc., New York, N. Y. (Steel wire mesh).
 Air & Refrigeration Corp., New York, N. Y. (Fiberglass)
 Air Filter Corp., Milwaukee, Wis. (Wire cloth)
 Air-Maze Corp., Cleveland, Ohio. (Metal wire baffles)
 Air Stream Filter Corp., St. Louis, Mo.
 • American Air Filter Co., Inc., Louisville, Ky. (Steel wool).
 Continental Air Filters, Inc., Louisville, Ky. (Copper, steel or aluminum)
 Coppus Engineering Corp., Worcester, Mass. (Felt).
 Dollinger Corp., Rochester, N. Y. (Feltex, Glastex, heat resistant cotton).
 Drico Industrial Corp., New York, N. Y. (Felt)
 Farr Co., Los Angeles, Calif. (Metal)
 Kauffman Air Conditioning Corp., St. Louis, Mo. (Aluminum)
 • Research Products Corp., Madison, Wis. (Metal).
 Smith Filter Corp., Moline, Ill. (Aluminum)
 Somers, Inc., H. J., Detroit, Mich. (Hair & glass)
 Universal Air Filter Corp., Duluth, Minn. (Cellulose).

Electrostatic

Air-Maze Corp., Cleveland, Ohio.
 • American Air Filter Co., Inc., Louisville, Ky.
 Raytheon Mfg. Co., Waltham, Mass.
 Trion, Inc., McKees Rocks, Pa.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Throwaway

• American Air Filter Co., Inc., Louisville, Ky.
 Detroit Air Filter Co., Woodstock, Ill. (Fibreboard).
 Drico Industrial Corp., New York, N. Y. (Glass)
 Glasfloss, New York, N. Y.
 Master Products Co., Inc., Chicago, Ill.
 • Owens-Corning Fiberglass Corp., Toledo, Ohio. (Fiberglass).
 • Research Products Corp., Madison, Wis.
 Sanit-Air Products Co., South Bend, Ind. (Register-steel wool).
 Universal Air Filter Corp., Duluth, Minn. (Cellulose).
 • Wilson & Co., Inc., Chicago, Ill. (Animal Hair).

• Advertisement in this issue. See Index to Advertisers, page 104-D.

FILTERS, FUEL OIL

- A-P Controls Corp., Milwaukee, Wis.
- Barclay Co., Robt., Chicago, Ill.
- Commercial Filters Corp., Boston, Mass.
- Coz-Nef Corp., St. Johnsbury, Vt.
- Cuno Engineering Corp., Meriden, Conn.
- Framm Corp., Providence, R. I.
- General Filters, Inc., Detroit, Mich.
- Klemm Automotive Products Co., Chicago, Ill.
- Kraissl Co., Inc., Hackensack, N. J.
- Morse-Smith-Morse, Inc., Watertown, Mass.
- Rega Mfg. Co., Rochester, N. Y.
- Sparkler Mfg. Co., Mundelein, Ill.
- W.G.B. Oil Clarifier, Inc., Kingston, N. Y.

FILTERS, GREASE

- Air Filter Corp., Milwaukee, Wis.
- Air-Maze Corp., Cleveland, Ohio.
- American Air Filter Co., Inc., Louisville, Ky.
- Farr Co., Los Angeles, Calif.
- Research Products Corp., Madison, Wis.
- Smith Filter Corp., Moline, Ill.

FIRE BRICK

See Refractories

FIREPOTS

See Repairs, Stove and Furnace

FITTINGS AND ACCESSORIES

Blow Pipe

(Elbows, Flanges, Hangers, Hoods and Sweeps, Joints, Rings, Tubing)

- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Barcafer Mfg. Co., Salina, Kans.
- Carolina Blower Co., Inc., Greensboro, N. C.
- Chicago Metal Mfg. Co., Chicago, Ill.
- Day Co., Minneapolis, Minn.
- Falstrom Co., Passaic, N. J.
- Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
- Kirk & Blum Mfg. Co., Cincinnati, Ohio. (Adjustable bluffing hoods).
- Lyman Co., H. B., Southampton, Mass.
- National Metal Fabricators, Chicago, Ill.
- Newcomb-Detroit Co., Detroit, Mich.
- Northern Blower Co., Cleveland, Ohio.
- Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
- Schmie Industries, Detroit, Mich.
- Skinner Heating & Vent Co., Heater Div., St. Louis Blow Pipe & Heater Co., Inc., St. Louis, Mo.
- Sleeth & Son, J. E., Spokane, Wash.
- Western Blower Co., Seattle, Wash.
- Winkler & Sons, Inc., A. E., Milwaukee, Wis.
- Young & Bertke Co., Cincinnati, Ohio.

Conductor

(Elbows, Hoods, Hooks, Shoes, Straps, Scuppers, etc.)

- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Atchison Specialty Mfg. Co., Atchison, Kans. (Scuppers, drains).
- Barnes Metal Products Co., Chicago, Ill.
- Berger Bros. Co., Philadelphia, Pa.
- Berger Mfg. Div. Republic Steel Corp., Canton, Ohio.
- Braden Mfg. Co., Terre Haute, Ind.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Cincinnati Elbow Co., Cincinnati, Ohio.
- T. F. Crary, Middleport, Ohio. (Cut offs)
- Diekmann Co., Ferdinand, Cincinnati, Ohio.
- Downs-Smith Brass & Copper Co., New York City, N. Y.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Franch & Fric, Cleveland, Ohio.
- Galvan Mfg. Co., New Albany, Ind. (Cut offs).
- Gerhardt Co., Inc., Geo. T., San Francisco, Calif.
- Gray Metal Products, Inc., Rochester, N. Y.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Inland Steel Products Co., Milwaukee, Wis.
- Iwan Bros. Inc., South Bend, Ind. (Wire hangers)
- Josam Mfg. Co., Cleveland, Ohio. (Drains and scuppers).
- Klauer Mfg. Co., Dubuque, Iowa.
- La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
- Lamb & Ritchie Co., Cambridge, Mass.
- Lewov, David, New York, N. Y.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- Maysteel Products, Inc., Milwaukee, Wis.

- Miller & Doing, Brooklyn, N. Y.
- New Delphos Mfg. Co., Delphos, Ohio.
- Newport Steel Corp., Newport, Ky.
- Northwest Metal Products, Inc., Seattle, Wash.
- Obodye, Inc., B. P., Philadelphia, Pa.
- Ohio Wire Products Co., Dover, Ohio. (Straps)
- Penn Supply & Metal Corp., Philadelphia, Pa.
- Rattan Mfg. Co., New Haven, Conn.
- Reeves Steel & Mfg. Co., Dover, Ohio.
- Reynolds Metals Co., Louisville, Ky.
- Rival Strap Corp., New York, N. Y. (Ornamental conductor straps).
- Royal-Apex Mfg. Corp., Brooklyn, N. Y.
- St. Paul Corrugating Co., St. Paul, Minn.
- Schoedinger, F. O., Columbus, Ohio.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sheet Metal Products Co., Peoria, Ill.
- Sioux Steel Co., Sioux Falls, S. Dak.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tiffin Art Metal Co., Tiffin, Ohio. (Heads)
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wallace Co., William, Metalbestos Div., Belmont, Calif.

Furnace Pipe

(Angles, Boots, Elbows, Heads, Joints, Offsets, Tees, etc.)

- Acer & Whedon, Inc., Medina, N. Y.
- Acme Furnace Fitting Co., Chicago, Ill.
- Acme Mfg. Co., Philadelphia, Pa.
- Adelta Mfg. Co., Inc., Philadelphia, Pa.
- Aire Flow Furnace Pipe Co., Detroit, Mich.
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Bergstrom Mfg. Corp., Neenah, Wis.
- Bieler & Son, Long Island City, N. Y. (Adjustable elbows).
- Braden Mfg. Co., Terre Haute, Ind.
- Champion Furnace Pipe Co., Peoria, Ill.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
- Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
- Clayton & Lambert Mfg. Co., Louisville, Ky.
- Corbman Bros., Inc., Philadelphia, Pa.
- Detroit Safety Furnace Pipe Co., Detroit, Mich.
- Eisbach, Albert N., Dubuque, Iowa. (Elbows)
- Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
- Excelsior Steel Furnace Co., Chicago, Ill.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Grand Island Furnace & Supply Co., Grand Island, Nebr.
- Gray Metal Products, Inc., Rochester, N. Y.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Henry Furnace Co., Medina, Ohio.
- Herbert & Sons, R. D., Nashville, Tenn.
- Howes-Woods Co., Cambridge, Mass.
- Inland Steel Products Co., Milwaukee, Wis.
- International Heater Co., Utica, N. Y.
- J & J Sheet Metal Co., Van Dyke, Mich. (Elbows)
- Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
- Keith Furnace Co., Des Moines, Iowa.
- Krauser-Boyd, Inc., North Tonawanda, N. Y. (Angles, elbows, boots, heads, etc.)
- La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Elbows)
- Lennox Furnace Co., Marshalltown, Iowa.
- Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
- Lyman Co., H. B., Southampton, Mass.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- Made-Rite Co., Inc., Newport, Ky.
- Majestic Co., Huntington, Ind.
- Maple City Furnace Co., Monmouth, Ill.
- Marshall Furnace Co., Marshall, Mich.
- Meyer & Bro. Co., F. Peoria, Ill.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Northwest Metal Products, Inc., Seattle, Wash.
- Norwalk Air Conditioning Corp., South Norwalk, Conn.
- Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Peerless Foundry Co., Indianapolis, Ind.
- Portland Stove Foundry Co., Portland, Maine.
- Premier Furnace Co., Dowagiac, Mich.
- Reeves Steel & Mfg. Co., Dover, Ohio.
- Riggin Metal Products, Inc., Kankakee, Ill.
- Rock Island Register Co., Rock Island, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
- Schecter Bros. Co., Philadelphia, Pa.
- Schoedinger, F. O., Columbus, Ohio.
- Sheet Metal Specialty Div. Follansbee Steel Corp., Pittsburgh, Pa.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sioux Steel Co., Sioux Falls, S. D.
- Souther Iron Co., E. E., St. Louis, Mo.
- Standard Furnace Supply Co., Omaha, Nebr.
- Stratton & Terstegge Co., Louisville, Ky.
- Superior Products Co., Omaha, Nebr.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tiffin Art Metal Co., Tiffin, Ohio. (Angles, boots, heads, joints & elbows)
- Tri-State Heating Supply, Inc., Fort Wayne, Ind.
- United States Register Co., Battle Creek, Mich. (Elbows & angles)
- Waterman-Waterbury Co., Minneapolis, Minn.
- Waverly Heating Supply Co., Boston, Mass.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheelock Co., Geo. F., Birmingham, Ala.
- Wildner Products Co., Springfield, Ohio.
- Williamson Heater Co., Cincinnati, Ohio.

Gutter

(Hangers, Strainers, Miters, Ends, Thimbles, etc.)

- Abbot Mfg. Co., Painesville, Ohio. (Hangers).
- Acme Mfg. Co., Philadelphia, Pa.
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Barnes Metal Products Co., Chicago, Ill.
- Berger Bros. Co., Philadelphia, Pa.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Braden Mfg. Co., Terre Haute, Ind.
- Campbell Stainless Products Co., Washington, Pa. (Stainless steel)
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
- Downs-Smith Brass & Copper Co., New York, N. Y.
- Eav-Tex Co., Havertown, Pa. (Roof gutter protection).
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Enderle Inc., Ltd., Frank X., Los Angeles, Calif.
- Famous Furnace Co., Cleveland, Ohio. (Strap hangers, end caps).
- Galvan Mfg. Co., New Albany, Ind. (Cut-offs, funnels)
- Grand Rapids Wire Products Co., Grand Rapids, Mich.
- Gray Metal Products, Inc., Rochester, N. Y.
- Herbert & Sons, R. D., Nashville, Tenn.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper).
- Inland Steel Products Co., Milwaukee, Wis.
- J & J Sheet Metal Co., Van Dyke, Mich.
- Klausner Mfg. Co., Dubuque, Iowa.
- Krauser-Boyd, Inc., North Tonawanda, N. Y. (Eaves trough, hangers, miters).
- LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
- Lamb & Ritchie Co., Cambridge, Mass.
- Levow, David, New York, N. Y.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- New Delphos Mfg. Co., Delphos, Ohio.
- Newport Steel Corp., Newport, Ky.
- Northwest Metal Products, Inc., Seattle, Wash.
- Oddyke, Inc., B. P., Philadelphia, Pa.
- Ohio Wire Products Co., Dover, Ohio. (Hangers).
- Penn Supply & Metal Corp., Philadelphia, Pa.
- Reeves Steel & Mfg. Co., Dover, Ohio.
- Reynolds Metals Co., Louisville, Ky. (Aluminum).
- Riggin Metal Products, Inc., Kankakee, Ill.
- Royal-Apex Mfg. Corp., Brooklyn, N. Y.
- St. Paul Corrugating Co., St. Paul, Minn.
- Schoedinger, F. O., Columbus, Ohio.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sheet Metal Products Co., Peoria, Ill.
- Sioux Steel Co., Sioux Falls, S. D.
- Snap-On Mfg. Co., Chicago, Ill. (Hangers).
- Souther Iron Co., E. E., St. Louis, Mo.
- Southern States Iron Roofing Co., Savannah, Ga.
- Steele Mfg. Co., Ashland, Ky. (Gutter guards)
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tiffin Art Metal Co., Tiffin, Ohio. (Hangers, miters, ends, thimbles)
- Tiffin Eaves Trough Clamp Co., Tiffin, Ohio. (Clamp).
- Wade Mfg. Co., Div. of Woodruff & Edwards, Inc., Elgin, Ill. (Roof Drains).
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wallace Co., William, Metalbestos Div., Belmont, Calif.

Oil Burner

- Ampion Corp., Long Island City, N. Y. (Oil Tank Solvent).

- Barclay Co., Robt., Chicago, Ill.
- Bearlee Products Co., Green Bay, Wis. (Vent Caps)
- Boston Machine Works Co., Lynn, Mass. (Nozzle extractor)
- Celco Corp., New York, N. Y. (Solvent)
- Dole Valve Co., Chicago, Ill. (Brass valves)
- Fisher Governor Co., Marshalltown, Iowa. (Liquid level controller)
- Gas & Oil Industry Laboratories, Inc., Irvington, N. J. (Valves).
- Hays Mfg. Co., Erie, Pa. (Valves & fittings)
- Heetlitter Co., Newberg, Ore. (Lighter)
- Hercules Chemical Co., Inc., New York, N. Y. (Tank solvent & oil line joint compound)
- Imperial Brass Mfg. Co., Chicago, Ill. (Flaring, bending & cutting tools for tubing)
- Leisur-Maid Mfg. Corp., Grand Rapids, Mich. (Furnace door safety spring & door closer)
- Lord Mfg. Co., Erie, Pa. (Flexible couplings)
- Lovejoy Flexible Coupling Co., Chicago, Ill. (Flexible couplings)
- Modern Die & Machine Co., Boston, Mass. (Combustion head)
- Morse-Smith-Morse, Inc., Watertown, Mass. (Vent caps, valves)
- Mueller Co., Decatur, Ill. (Valves)
- Oil Equipment Mfg. Co., New Haven, Conn. (Vent caps, fuel pump testers, flaring tools, oil storage tank fittings)
- Petroleum Solvents Corp., New York, N. Y. (Oil tank solvent)
- Radiator Specialty Co., Charlotte, N. C. (Tank solvent)
- Rajah Co., Bloomfield, N. J. (Wire crimpers & terminals)
- Rattan Mfg. Co., New Haven, Conn. (Connectors)
- Red Wing Oil Burner Co., Inc., Chelsea, Mass. (Tank solvent)
- Richfield Mfg. Corp., New Rochelle, N. Y. (Combustion heads)
- Rochester Mfg. Co., Inc., Rochester, N. Y. (Test kits)
- S.O.S. Products Co., Inc., Brooklyn, N. Y. (Tank solvent)
- Shell Oil Co., New York, N. Y. (Combustion head).
- Snap-on Tools Corp., Kenosha, Wis. (Flaring tools)

Smoke Pipe

(Draw-bands, Clean-outs, Collars, Tees, etc.)

- Acer & Whedon, Inc., Medina, N. Y.
- Acme Furnace Fitting Co., Chicago, Ill.
- Acme Mfg. Co., Philadelphia, Pa.
- Adelta Mfg. Co., Inc., Philadelphia, Pa.
- Aire Flow Furnace Pipe Co., Detroit, Mich.
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Ballonoff Metal Products Co., Cleveland, Ohio.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Bergstrom Mfg. Corp., Neenah, Wis.
- Bieler & Sons, Inc., L., Long Island City, N. Y.
- Braden Mfg. Co., Terre Haute, Ind.
- Cary Mfg. Co., Waupaca, Wis.
- Champion Furnace Pipe Co., Peoria, Ill.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
- Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
- Clayton & Lambert Mfg. Co., Louisville, Ky.
- Corbman Bros., Inc., Philadelphia, Pa.
- Detroit Safety Furnace Pipe Co., Detroit, Mich.
- Eisbach, Albert N., Dubuque, Iowa. (Drawbands)
- Excelsior Steel Furnace Co., Chicago, Ill.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Famous Furnace Co., Cleveland, Ohio.
- Gray Metal Products, Inc., Rochester, N. Y.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Henry Furnace Co., Medina, Ohio.
- Herbert & Sons, R. D., Nashville, Tenn.
- Howes-Woods Co., Cambridge, Mass.
- Inland Steel Products Co., Milwaukee, Wis.
- International Heater Co., Utica, N. Y.
- J & J Sheet Metal Co., Van Dyke, Mich.
- Keith Furnace Co., Des Moines, Iowa.
- Kirk & Blum Mfg. Co., Cincinnati, Ohio.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
- Lennox Furnace Co., Marshalltown, Iowa.
- Lyman Co., H. B., Southampton, Mass.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- Made-Rite Co., Inc., Newport, Ky.
- Majestic Co., Huntington, Ind.
- Maple City Furnace Co., Monmouth, Ill.
- Marshall Furnace Co., Marshall, Mich.
- May-Fieberger Co., Newark, Ohio.
- Meyer & Bro. Co., F., Peoria, Ill.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Northwest Metal Products, Inc., Seattle, Wash.
- Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
- Peacard Co., M. A., Boston, Mass.
- Peerless Foundry Co., Indianapolis, Ind.
- Portland Stove Foundry Co., Portland, Maine.
- Premier Furnace Co., Dowagiac, Mich.
- Reeves Steel & Mfg. Co., Dover, Ohio.
- Riggin Metal Products, Inc., Kankakee, Ill.
- Rock Island Register Co., Rock Island, Ill.
- Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
- Schecter Bros. Co., Philadelphia, Pa.
- Schoedinger, F. O., Columbus, Ohio.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.
- Sioux Steel Co., Sioux Falls, S. Dak.
- Souther Iron Co., E. E., St. Louis, Mo.
- Standard Furnace Supply Co., Omaha, Nebr.
- Stratton & Terstegge Co., Louisville, Ky.
- Superior Products Co., Omaha, Nebr.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tierney Rotor Ventilator Co., Minneapolis, Minn.
- Tiffin Art Metal Co., Tiffin, Ohio, (Draw-bands, clean-outs, collars, tees)
- Tri-State Heating Supply, Inc., Fort Wayne, Ind.
- United States Register Co., Battle Creek, Mich. (Elbows & angles)
- Waterman-Waterbury Co., Minneapolis, Minn.
- Waverly Heating Supply Co., Boston, Mass.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wilder Products Co., Springfield, Ohio
- Williamson Heater Co., Cincinnati, Ohio.

FITTINGS, COPPER TUBE, COMPRESSION AND FLARED

- American Brass Co., Waterbury, Conn.
- Barcafer Mfg. Co., Salina, Kans.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Commonwealth Brass Corp., Detroit, Mich.
- Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
- Crane Co., Chicago, Ill.
- Dole Valve Co., Chicago, Ill.
- Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
- Everhot Products Co., Chicago, Ill.
- Fisher Brass Foundry, Los Angeles, Calif.
- Gray-Wilson Co., Detroit, Mich.
- Hays Mfg. Co., Erie, Pa.
- Imperial Brass Mfg. Co., Chicago, Ill.
- Kerotest Mfg. Co., Pittsburgh, Pa.
- Madden Brass Products Co., Chicago, Ill.
- Mueller Brass Co., Port Huron, Mich.
- Mueller Co., Decatur, Ill.
- Northern Indiana Brass Co., Elkhart, Ind.
- Oil Equipment Mfg. Co., New Haven, Conn.
- Parker Appliance Co., Cleveland, Ohio.
- Scovill Mfg. Co., Waterville Div., Waterville, Conn.
- Weatherhead Co., Cleveland, Ohio.

FITTINGS, HUMIDIFIER, WATER LINE

- American Brass Co., Waterbury, Conn.
- Hays Mfg. Co., Erie, Pa.
- McDonnell & Miller, Inc., Chicago, Ill.
- Maid-O-Mist, Inc., Chicago, Ill.
- Mueller Brass Co., Port Huron, Mich.
- Reichert Float & Mfg. Co., Toledo, Ohio.
- Ross Sprinkler Co., Pasadena, Calif.
- Skuttel Mfg. Co., Detroit, Mich.

FLANGING MACHINES

See Machines, Flanging

FLASHINGS, ROOF, PREFABRICATED

- Alpha Metals, Inc., Brooklyn, N. Y.
- Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
- Berger Mfg. Div., Republic Steel Co., Canton, Ohio.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Cheney Flashing Co., Trenton, N. J.
- Division Lead Co., Chicago, Ill.
- Eagle-Picher Co., Cincinnati, Ohio.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Figge Mfg. Co., Chicago, Ill.
- Flemm Lead Co., Inc., Long Island City, N. Y.
- Fry Reglet Corp., Bremerton, Wash.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Inland Steel Products Co., Milwaukee, Wis.
- Keystone Flashing Co., Philadelphia, Pa.

- National Lead Co., New York City, N. Y.
- New Delphos Mfg. Co., Delphos, Ohio.
- Overly Mfg. Co., Greensburg, Pa.
- Plasteel Products Co., Washington, Pa.
- Revere Copper & Brass Inc., New York, N. Y.
- Schoedinger, F. O., Columbus, Ohio.
- Simplex Mfg. Co., Fond du Lac, Wis.
- Sisalkraft Co., Chicago, Ill.
- Vallas, Lionel, Chicago, Ill.
- Van Noorden Co., E., Boston, Mass.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wallace Co., William, Metalbestos Div., Belmont, Calif.

FLASHINGS, THROUGH-WALL, PREFABRICATED

- American Brass Co., Waterbury, Conn.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Cheney Flashing Co., Trenton, N. J.
- Figge Mfg. Co., Chicago, Ill.
- Hussey & Co., C. G., Pittsburgh, Pa.
- Keystone Flashing Co., Philadelphia, Pa.
- New Delphos Mfg. Co., Delphos, Ohio.
- Revere Copper and Brass Inc., New York, N. Y.
- Sisalkraft Co., Chicago, Ill.
- Vallas, Lionel, Chicago, Ill.
- Van Noorden Co., E., Boston, Mass.
- Wasco Flashing Co., Cambridge, Mass.

FLUE GAS ANALYZERS

See Analyzers, CO; Portable

FLUX

Soldering

- Air Reduction Sales Co., New York, N. Y. (All metals)
- Allen Co., Inc., L. B., Chicago, Ill. (All metals)
- All-State Welding Alloys Co., Inc., White Plains, N. Y.
- Alpha Metals, Inc., Brooklyn, N. Y. (All metals)
- Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
- American Chemical Paint Co., Ambler, Pa. (All metals)
- American Products Corp., Chicago, Ill. (Stainless, monel, inconel, nickel, nickelchrome, alloys)
- American Solder & Flux Co., Philadelphia, Pa. (All metals)
- Bastian-Blessing Co., Chicago, Ill.
- Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Aluminum, copper, galv. & stainless steel)
- Benson Co., Inc., Alex R., Hudson, N. Y. (Copper, galv. & stainless steel)
- Burnley Battery & Mfg. Co., North East, Pa. (Paste, salts, solution). (All metals except aluminum and stainless steel)
- Carajon Chemical Co., Inc., Fremont, Mich. (Copper, galv. & stainless steel)
- Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
- Diener Mfg. Co., Geo. W., Chicago, Ill.
- Division Lead Co., Chicago, Ill. (All metals)
- du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Cast iron, copper; plain, stainless, galv., and tinned steel)
- Eutectic Welding Alloys Co., New York, N. Y. (Aluminum, copper, galv. & stainless steel)
- Farrelloy Co., Philadelphia, Pa. (All metals)
- Flux-All Chemical Products, New York, N. Y. (Stainless steel, copper, galv. & aluminum)
- Fusion Engineering, Cleveland, Ohio. (All metals)
- Garden City Laboratory, Div. Pritchardsons, Chicago, Ill. (Galv. steel)
- General Electric Co., Bridgeport, Conn.
- Glaser Lead Co., Inc., Brooklyn, N. Y. (Every purpose).
- Handy & Harman, New York, N. Y. (Brass, bronze & nickel alloys)
- Hercules Chemical Co., Inc., New York, N. Y. (All metals except aluminum & stainless steel)
- Industrial Service Laboratories, Milwaukee, Wis. (Stainless, Galv., copper).
- Johnson Gas Appliance Co., Cedar Rapids, Iowa.
- Johnson Mfg. Co., Mount Vernon, Iowa. (Aluminum, copper, galv. stainless steel)
- Kester Solder Co., Chicago, Ill. (Aluminum, copper, galv. & stainless steel)
- Kirk & Son, Morris P., Los Angeles, Calif.
- Klem Chemicals, Inc., Dearborn, Mich. (Copper, iron, stainless steel)
- Lake Chemical Co., Chicago, Ill.
- Langenkamp Co., F. H., Indianapolis, Ind. (Stainless steel)
- Lenk Mfg. Co., Boston, Mass. (Copper; galv. & stainless steel)
- Lewis Laboratories, Inc., Paul, Milwaukee, Wis.
- Linde Air Products Co., New York, N. Y. (Bronze, cast iron & stainless steel)
- Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
- Lukens Metal Co., Thos. F., Philadelphia, Pa. (Copper, galv. & stainless steel)
- National Cylinder Gas Co., Chicago, Ill. (All metals)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

National Lead Co., New York, N. Y. (All metals)
 Neilson Chemical Co., Detroit, Mich. (For steel).
 Pfannstiel Chemical Co., Waukegan, Ill. (Copper, galv. & stainless steel)
 Potomac Mfg. Co., Philadelphia, Pa. (Aluminum, copper, galv. & stainless steel)
 • Reiner & Campbell Co., Inc., Newark, N. J.
 Ruby Chemical Co., Columbus, Ohio. (Copper, galv. & stainless steel)
 Sherman & Co., Flushing, N. Y. (Galv. & stainless steel)
 S.O.S. Products Co., Inc., Brooklyn, N. Y. (All metals)
 Superior Flux & Mfg. Co., Cleveland, Ohio. (All metals)
 Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
 Tinit Mfg. Co., Inc., Denver, Colo. (All metals).
 Turco Products, Inc., Los Angeles, Calif.
 Wolfe-Kote Co., Sheboygan, Wis.

Welding

All-State Welding Alloys Co., Inc., White Plains, N. Y.
 Aluminum Co. of America, Pittsburgh, Pa.
 American Solder & Flux Co., Philadelphia, Pa.
 Eutectic Welding Alloys Corp., New York, N. Y.
 Farrelloy Co., Los Angeles, Calif. (Also brazing)
 International Nickel Co., Inc., New York, N. Y.
 Midland Paint & Varnish Co., Cleveland, Ohio.
 National Cylinder Gas Co., Chicago, Ill.
 Sight Feed Generator Co., West Alexandria, Ohio.
 Smith Welding Equipment Corp., Minneapolis, Minn.
 Superior Flux & Mfg. Co., Cleveland, Ohio.
 Tinit Mfg. Co., Inc., Denver, Colo.

FUEL OIL FILTERS

See *Filters, Fuel Oil*

FURNACE BLOWERS

See *Blowers; Blower-Filter Units; Blower-Washer Units*

FURNACE CEMENT

See *Cement, Furnace*

FURNACE CLEANERS

See *Cleaners, Vacuum, Furnace*

FURNACE PIPE

See *Pipe, Furnace*

FURNACE PIPE FITTINGS AND ACCESSORIES

See *Fittings and Accessories, Furnace Pipe*

FURNACE REGULATORS

See *Regulators, Furnace Draft, Mechanical; Controls*

FURNACE REPAIRS

See *Repairs, Stove and Furnace*

FURNACES, SOLDERING

Acme Electric Heating Co., Inc., Boston, Mass. (Electric)
 Aeroil Products Co., Inc., South Hackensack, N. J.
 Bernz Co., Otto, Rochester, N. Y.
 Clayton & Lambert Mfg. Co., Louisville, Ky.
 Diener Mfg. Co., Geo. W., Chicago, Ill.
 Eclipse Fuel Engineering Co., Rockford, Ill.
 Fieser Co., F. J., New York, N. Y.
 Fusion Engineering, Cleveland, Ohio.
 Goss Gas Products Co., Pittsburgh, Pa.
 Hones, Inc., Charles A., Baldwin, N. Y. (Gas).
 Inland Steel Products Co., Milwaukee, Wis.
 Insto-Gas Corp., Detroit, Mich. (Gas)
 • Johnson Gas Appliance Co., Cedar Rapids, Iowa.
 Met Sales & Mfg. Co., Rockford, Ill.
 Mutual Liquid Gas & Equipment Co., Inglewood, Calif.
 Ramson Co., Emeryville, Calif.
 • Reiner & Campbell Co., Inc., Newark, N. J.
 Reliable Gas Products Co., Cedar Rapids, Iowa.
 Sanders, J. A., Fulton, N. Y.
 • Turner Brass Works, Sycamore, Ill.
 Unique Mfg. Co., Inc., Chicago, Ill. (Gasoline, Kerosene).
 Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric)
 Weiss & Co., H., New York, N. Y.
 Westinghouse Electric Corp., Pittsburgh, Pa.

FURNACES, WARM AIR, GRAVITY

Cool, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
 • Airtemp Div., Chrysler Corp., Dayton, Ohio.
 American Foundry & Furnace Co., Bloomington, Ill.
 • American Furnace Co., St. Louis, Mo.
 American Furnace & Foundry Co., Milan, Mich.
 • American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Bovee Furnace Works, Waterloo, Iowa.
 Crane Co., Chicago, Ill.
 Edwards Furnace Co., Wellsboro, Pa.
 Excelsior Steel Furnace Co., Chicago, Ill.
 Excelsior Stove & Mfg. Co., Quincy, Ill.
 Farris Furnace Co., Springfield, Ill.
 Favorite Stove Co., Piqua, Ohio.
 • Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.

Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.

Green Colonial Furnace Co., Des Moines, Iowa.
 Hare Engineering Co., Detroit, Mich.
 Hart Furnace and Supply Co., Louisville, Ky.
 • Henry Furnace Co., Medina, Ohio.
 • Hess-Snyder Co., Massillon, Ohio.
 Home Furnace Co., Holland, Mich.
 Homer Furnace & Foundry Corp., Coldwater, Mich.
 Independence Stove & Furnace Co., Independence, Mo.
 International Heater Co., Utica, N. Y.
 Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.
 Keith Furnace Co., Des Moines, Iowa.
 Kelsey Heating Co., Syracuse, N. Y.
 MaGill Foundry & Furnace Co., Bloomington, Ill.
 • Majestic Co., Huntington, Ind.
 Maple City Furnace Co., Monmouth, Ill.
 Marshall Furnace Co., Marshall, Mich.
 • May-Fieberger Co., Newark, Ohio.
 Montag Stove & Furnace Works, Portland, Ore.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 • National Heater Co., St. Paul, Minn.
 • Olsen Mfg. Co., C. A., Elyria, Ohio.
 Omaha Stove Repair Works, Inc., Omaha, Nebr.
 Pittston Stove Co., Pittston, Pa.
 Portland Stove Foundry Co., Portland, Maine.
 • Premier Furnace Co., Dowagiac, Mich.
 Quick Furnace & Supply Co., Des Moines, Iowa.
 • Round Oak Co., Inc., of Ind., Dowagiac, Mich.
 • Rybolt Heater Co., Ashland, Ohio.
 St. Clair Foundry Corp., Centralia, Ill.
 Schill Mfg. Co., Crestline, Ohio.
 • Schwab Furnace Co., Milwaukee, Wis.
 Spear Stove & Heater Co., James, Philadelphia, Pa.
 Union Mfg. Co., Inc., Boyertown, Pa.
 United States Radiator Corp., Detroit, Mich.
 Westwick & Son, Inc., John, Galena, Ill.
 • Williamson Heater Co., Cincinnati, Ohio.
 • Wise Furnace Co., Akron, Ohio.
 • XXth Century Heating & Ventilating Co., Akron, Ohio.

Coal, Steel

• Airtemp Div., Chrysler Corp., Dayton, Ohio.
 • American Furnace Co., St. Louis, Mo.
 American Furnace & Foundry Co., Milan, Mich.
 • American Radiator and Standard Sanitary Corp., Pittsburgh, Pa.
 • Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
 Andrews Heating Co., Minneapolis, Minn.
 Arcweld Mfg. Co., Inc., Seattle, Wash.
 • Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
 Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
 Bard Mfg. Co., Bryan, Ohio.
 Berger Furnace Mfg. Co., Pittsburgh, Pa.
 Bovee Furnace Works, Waterloo, Iowa.
 Brenner Co., Jacob, Fond du Lac, Wis.
 Campbell Heating Co., Des Moines, Iowa.
 Certified Furnace Co., St. Paul, Minn.
 • Conco Engineering Works, Mendota, Ill.
 Crane Co., Chicago, Ill.
 Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
 Dethler Foundry & Mach. Wks., Deshler, Ohio.
 • Dowagiac Steel Furnace Co., Dowagiac, Mich.
 Dual-X Furnace Mfg. Co., Chicago, Ill.
 Excelsior Stove & Mfg. Co., Quincy, Ill.
 Fairbanks, Morse & Co., Chicago, Ill.
 Farquhar Furnace Co., Wilmington, Ohio.
 Floral City Heater Co., Monroe, Mich.
 • Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
 Friendly Furnace & Foundry Co., Sioux City, Iowa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
 Furbio Co., Hermansville, Mich.
 Gross-Aire Mfg. Co., St. Louis, Mo.
 • Hall-Neal Furnace Co., Indianapolis, Ind.
 Hart & Crouse Corp., Oneida, N. Y.
 Hart Furnace and Supply Co., Louisville, Ky.
 • Henry Furnace Co., Medina, Ohio.
 • Hess-Snyder Co., Massillon, Ohio.
 • Hess Co., Chicago, Ill.
 Homer Furnace & Foundry Corp., Coldwater, Mich.
 Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
 International Heater Co., Utica, N. Y.
 Jackson & Church Co., Saginaw, Mich.
 Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
 Keith Furnace Co., Des Moines, Iowa.
 Lennox Furnace Co., Marshalltown, Iowa.
 Locke Stove Co., Kansas City, Mo.
 MacGill Foundry & Furnace Co., Bloomington, Ill.
 • Majestic Co., Huntington, Ind.
 • May-Fieberger Co., Newark, Ohio.
 • Mayflower Air Conditioners, Inc., St. Paul, Minn.
 • Meyer Furnace Co., Peoria, Ill.
 Mohawk Metal Products Co., Inc., Frankfort, N. Y.
 Montag Stove & Furnace Works, Portland, Ore.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 • National Heater Co., St. Paul, Minn.
 • Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
 Northwest Foundry & Furnace Co., Portland, Ore.
 Nugent Furnaces, Thos., New York, N. Y.
 • Olsen Mfg. Co., C. A., Elyria, Ohio.
 • Omaha Stove Repair Works, Inc., Omaha, Nebr.
 • Peerless Foundry Co., Indianapolis, Ind.
 Portland Stove Foundry Co., Portland, Maine.
 Premier Furnace Co., Dowagiac, Mich.
 Quick Furnace & Supply Co., Des Moines, Iowa.
 Radiation Furnace Corp., Benton Harbor, Mich.
 Rosebraugh Co., W. W., Salem, Ore.
 • Round Oak Co., Inc., of Ind., Dowagiac, Mich.
 Ruby Management Co., Pittsburgh, Pa.
 • Ryholt Heater Co., Ashland, Ohio.
 St. Louis Furnace Mfg. Co., St. Louis, Mo.
 Sandberg Mfg. Co., Portland, Ore.
 • Schill Mfg. Co., Crestline, Ohio.
 • Schwab Furnace Co., Milwaukee, Wis.
 • Stokol Stoker Co., Inc., Dayton, Ohio.
 Supreme Gas Burner Mfg. Co., Holly, Mich.
 Sure Comfort Furnace Co., Forest Park, Ill.
 • Synchronic Corp., Watertown, Wis.
 • Thatcher Furnace Co., Garwood, N. J.
 • Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
 Tri-State Heating Supply, Inc., Fort Wayne, Ind.
 United States Radiator Corp., Detroit, Mich.
 • Viking Mfg. Corp., Cleveland, Ohio.
 • Waterman-Waterbury Co., Minneapolis, Minn.
 Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
 Westwick & Son, Inc., John, Galena, Ill.
 • Wheeling Furnace Corp., Martins Ferry, Ohio.
 • Williamson Heater Co., Cincinnati, Ohio.
 • Wise Furnace Co., Akron, Ohio.
 Worsham Co., Inc., St. Louis, Mo.

Electric

- Gray & Dudley Co., Nashville, Tenn. (Floor)

Floor, Gas

- Advance Furnace Co., Wichita, Kans.
- Allied Heating & Air Conditioning Co., Lawndale, Calif.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Burner Co., Oklahoma City, Okla.
- Andrews Heater Co., Los Angeles, Calif.
- Barnes Heating & Ventilating Co., Long Beach, Calif.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Benner-Newman, Inc., Oakland, Calif.
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Central States Mfg. Co., Inc., Arkansas City, Kans.
- Cole Hot Blast Mfg. Co., Chicago, Ill.
- Coleman Co., Inc., Wichita, Kans.
- Commonwealth Co., Alhambra, Calif.
- Deluxe Furnace & Wall Heater Co., Inglewood, Calif.
- Empire Stove Co., Belleville, Ill.
- Ford Blow Pipe & Mfg. Co., Memphis, Tenn.
- Fraser & Johnston Co., San Francisco, Calif.
- Gray & Dudley Co., Nashville, Tenn.
- Hammel Radiator Engineering Co., Los Angeles, Calif.
- Hart-Mun Furnace Co., Tulsa, Okla.

- Heating Equipment Mfg. Co., San Francisco, Calif.
- Holly Mfg. Co., Pasadena, Calif.
- Hobbs Heater Co., Cleveland, Ohio.
- Ideal Heating Corp., Los Angeles, Calif.
- International Sales Co., San Francisco, Calif.
- Johnston Gas Furnace Corp., Ltd., North Hollywood, Calif.
- King Metal Co., Oklahoma City, Okla.
- Lawson Mfg. Co., Pittsburgh, Pa.
- Lennox Furnace Co., Marshalltown, Iowa.
- Mahl Mfg. Co., Huntington Park, Calif.
- Meyer Furnace Co., Peoria, Ill.
- Miller Floor Furnace Co., Oakland, Calif.
- Monarch Heating Co., Los Angeles, Calif.
- Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
- Mulkey Co., J. F., Detroit, Mich.
- National Appliances, Inc., Pittsburgh, Pa.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Pacific Gas Heating Co., San Francisco, Calif.
- Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Perfection Stove Co., Cleveland, Ohio.
- Queen Stove Works, Inc., Albert Lea, Minn.
- Rheem Mfg. Co., New York, N. Y.
- Samuel Stamping & Enameling Co., Chattanooga, Tenn.
- Santa Clara Metal Products Co., Santa Clara, Calif.
- Security Mfg. Co., Kansas City, Mo.
- Sequoia Mfg. Co., San Carlos, Calif.
- Stephens Mfg. Co., Tulsa, Okla.
- Sunshine Mantle Co., Chanute, Kans.
- Surface Combustion Corp., Toledo, Ohio.
- Temco, Inc., Nashville, Tenn.
- Thermo-Products, Inc., North Judson, Ind.
- U-Ni-Matic Heating Systems, Inc., Los Angeles, Calif.
- Universal Metal Products, Alhambra, Calif.
- Utility Appliance Corp., Los Angeles, Calif.
- Viking Mfg. Corp., Cleveland, Ohio.
- Ward Heater Co., Los Angeles, Calif.
- Zink Co., John, Tulsa, Okla.

Floor, Oil

- Anchor Div., Stratton & Terstege Co., New Albany, Ind.
- Auburn Burner Co., Auburn, Ind.
- Benner-Newman, Inc., Oakland, Calif.
- Beyer Oil Burner Co., Rosamond, Calif.
- Bone Tool & Gauge Co., Detroit, Mich.
- Calimode, Inc., Atlanta, Ga.
- Coleman Co., Inc., Wichita, Kans.
- Consolidated Industries, Inc., Lafayette, Ind.
- Delta Heating Corp., Jackson Hts., L. I., N. Y.
- Domestic Mfg. Co., Seattle, Wash.
- Evans Products Co., Plymouth, Mich.
- Gillen Co., J. L., Dowagiac, Mich.
- Heating Equipment Mfg. Co., San Francisco, Calif.
- Jackson G. Gilmore & Co., Columbus, Ohio.
- Kresky Mfg. Co., Inc., Petaluma, Calif.
- Little Burner Co., Inc., H. C., San Rafael, Calif.
- Mulkey Co., J. F., Detroit, Mich.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Northwest Metal Products, Inc., Seattle, Wash.
- Oran Co., Columbus, Ohio.
- Queen Stove Works, Inc., Albert Lea, Minn.
- Sequoia Mfg. Co., San Carlos, Calif.
- Stoker-Lad Co., Tacoma, Wash.
- Therm Oil Burner Co., Seattle, Wash.
- Thermo-Products, Inc., North Judson, Ind.
- United Air Heaters, Inc., Seattle, Wash.
- Viking Mfg. Corp., Cleveland, Ohio.

Gas, Cast Iron

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace Co., St. Louis, Mo.
- Corroaire Heater Corp., Cleveland, Ohio.
- Favorite Stove Co., Piqua, Ohio.
- Firewel Co., Inc., Buffalo, N. Y.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Henry Furnace Co., Medina, Ohio.
- International Heater Co., Utica, N. Y.
- Kelsey Heating Co., Syracuse, N. Y.
- Marshall Furnace Co., Marshall, Mich.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Ryholt Heater Co., Ashland, Ohio.
- Silver Flame, Inc., Detroit, Mich.
- Sioux City Foundry & Boiler Co., Sioux City, Iowa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Surface Combustion Corp., Toledo, Ohio.
- Twin City Gas Specialty Co., Minneapolis, Minn.
- Wise Furnace Co., Akron, Ohio.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Gas, Steel

- Advance Furnace Co., Wichita, Kans.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Airwasher Corp., Eaton Rapids, Mich.
- Aladdin Heating Corp., Oakland, Calif.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis, Minn.
- Andrews-Schroeder Heating Co., Inc., Glendale, Calif.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Automatic Firing Corp., St. Louis, Mo.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Mfg. Co., Bryan, Ohio.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Brown Steel Tank Co., Minneapolis, Minn.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Campbell Heating Co., Des Moines, Iowa.
- Coleman Co., Inc., Wichita, Kans.
- Conco Engineering Works, Mendota, Ill.
- Delco Appliance Div., General Motors Corp., Rochester, N. Y.
- Dornback Furnace & Foundry Co., Cleveland, Ohio.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Evans Products Co., Plymouth, Mich.
- Excelsior Stove Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Fraser and Johnston Co., San Francisco, Calif.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hammel Radiator Engineering Co., Los Angeles, Calif.
- Heating Specialties Co., Baltimore, Md. (Stainless)
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Hess-Snyder Co., Massillon, Ohio.
- Holly Mfg. Co., Pasadena, Calif.
- Hotentot Co., Inc., Omaha, Nebr.
- Independence Stove & Furnace Co., Independence, Mo.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- International Heater Co., Utica, N. Y.
- International Oil Burner Co., St. Louis, Mo.
- International Sales Co., San Francisco, Calif.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kleenair Furnace Co., Portland, Ore.
- Ko-Z-Aire, Inc., Red Oak, Iowa.
- Lennox Furnace Co., Marshalltown, Iowa.
- Lundt, Inc., Ernest C., Little Falls, N. J.
- May-Fieberger Co., Newark, Ohio.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Norman Products Co., Inc., Columbus, Ohio.
- Nugent Furnaces, Thomas, New York, N. Y.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Pacific Gas Heating Co., San Francisco, Calif.
- Patten Co., J. V., Sycamore, Ill.
- Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Peerless Foundry Co., Indianapolis, Ind.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Perfection Stove Co., Cleveland, Ohio.
- Rheem Mfg. Co., New York, N. Y.
- Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
- Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
- Ruby Management Co., Pittsburgh, Pa.
- Rybolt Heater Co., Ashland, Ohio.
- St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Schill Mfg. Co., Crestline, Ohio.
- Schwab Furnace Co., Milwaukee, Wis.

- Security Mfg. Co., Kansas City, Mo.
- Sequoia Mfg. Co., San Carlos, Calif.
- Silver Flame Industries, Inc., Detroit, Mich.
- Stewart Co., W. H., Oklahoma City, Okla.
- Stokol Stoker Co., Inc., Dayton, Ohio.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Surface Combustion Corp., Toledo, Ohio.
- Thatcher Furnace Co., Garwood, N. J.
- Tordheest Div., Cleveland Steel Products Corp., Cleveland, Ohio.
- United States Radiator Corp., Detroit, Mich.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Williamson Heater Co., Cincinnati, Ohio.
- Wise Furnace Co., Akron, Ohio.
- York-ShIPLEY, Inc., York, Pa.

Gas-Oil, Combination, Steel

- Automatic Firing Corp., St. Louis, Mo.
- Campbell Heating Co., Des Moines, Iowa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Henry Furnace Co., Medina, Ohio.
- Majestic Co., Huntington, Ind.
- Norman Products Co., Inc., Columbus, Ohio.
- Surface Combustion Corp., Toledo, Ohio.

Oil, Cast Iron

- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace Foundry Co., Milan, Mich.
- Edwards Furnace Co., Wellsville, Pa.
- International Heater Co., Utica, N. Y.
- Keith Furnace Co., Des Moines, Iowa.
- Kelsey Heating Co., Syracuse, N. Y.
- Marshall Furnace Co., Marshall, Mich.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Sioux City Foundry & Boiler Co., Sioux City, Iowa.
- Wise Furnace Co., Akron, Ohio.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Oil, Steel

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Airwasher Corp., Eaton Rapids, Mich.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Gas Machine Co., Albert Les, Minn.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- American Stove Co., Lorain Div., St. Louis, Mo.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis, Minn.
- Arcweld Mfg. Co., Inc., Seattle, Wash.
- Automatic Firing Corp., St. Louis, Mo.
- Automatic Furnace Co., Lansing, Mich.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Mfg. Co., Bryan, Ohio.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Beyer Oil Burner Co., Rosamond, Calif.
- Bovee Furnace Works, Waterloo, Iowa.
- Brown Steel Tank Co., Minneapolis, Minn.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
- Calimode, Inc., Atlanta, Ga.
- Campbell Heating Co., Des Moines, Iowa.
- Cary Mfg. Co., Waupaca, Wis.
- Certified Furnace Co., St. Paul, Minn.
- Chandler Co., Cedar Rapids, Iowa.
- Coleman Co., Inc., Wichita, Kans.
- Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
- Delco Appliance Div., General Motors Corp., Rochester, N. Y.
- Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Evans Products Co., Plymouth, Mich.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Niagara Furnace Co., Cleveland, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Furblo Co., Hermansville, Mich.
- Gillen Co., J. L., Dowagiac, Mich.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hart & Crouse Corp., Oneida, N. Y.
- Heating Specialties Co., Baltimore, Md. (Stainless)
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Hotentot Co., Inc., Omaha, Nebr.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- International Oil Burner Co., St. Louis, Mo.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Keith Furnace Co., Des Moines, Iowa.
- Kleenair Furnace Co., Portland, Ore.

• Advertisement in this issue. See Index to Advertisers, page 1043.

- Ko-Z-Aire, Inc., Red Oak, Iowa.
- Kresky Mfg. Co., Inc., Petaluma, Calif.
- Lennox Furnace Co., Marshalltown, Iowa.
- Little Burner Co., Inc., H. C., San Rafael, Calif.
- Lundt, Inc., Ernest C., Little Falls, N. J.
- McKee Air Conditioning Co., Minneapolis, Minn.
- Majestic Co., Huntington, Ind.
- May-Fieberger Co., Newark, Ohio.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Mohawk Metal Products Co., Inc., Frankfort, N. Y.
- Montag Stove & Furnace Works, Portland, Ore.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Norwalk Air Conditioning Corp., South Norwalk, Conn.
- Nugent Furnaces, Thomas, New York, N. Y.
- Nu-Way Corp., Rock Island, Ill.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Patten Co., J. V., Sycamore, Ill.
- Peerless Foundry Co., Indianapolis, Ind.
- Perfection Stove Co., Cleveland, Ohio.
- Portland Stove Foundry Co., Portland, Maine.
- Premier Furnace Co., Dowagiac, Mich.
- Queen Stove Works, Inc., Albert Lea, Minn.
- Quincy Stove Mfg. Co., Quincy, Ill.
- Rosebraugh Co., W. W., Salem, Ore.
- Round Oak Co., Inc. of Ind., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, Ohio.
- Sandberg Mfg. Co., Portland, Ore.
- Schwab Furnace Co., Milwaukee, Wis.
- Schwab Safe Co., Lafayette, Ind.
- Silver Flame Industries, Inc., Detroit, Mich.
- Stokol Stoker Co., Inc., Dayton, Ohio.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Syncromatic Corp., Watertown, Wis.
- Thatcher Furnace Co., Garwood, N. J.
- Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
- United States Radiator Corp., Detroit, Mich.
- Viking Mfg. Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
- Williamson Heater Co., Cincinnati, Ohio.
- York-Shipley, Inc., York, Pa.

Pipeless, Cast Iron

- Agricola Furnace Co., Inc., Gadsden, Ala.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Edwards Furnace Co., Wellsboro, Pa.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Favorite Stove Co., Piqua, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Henry Furnace Co., Medina, Ohio.
- Independence Stove & Furnace Co., Independence, Mo.
- International Heater Co., Utica, N. Y.
- Keith Furnace Co., Des Moines, Iowa.
- Kelsey Heating Co., Syracuse, N. Y.
- MaGirl Foundry & Furnace Co., Bloomington, Ill.
- Marshall Furnace Co., Marshall, Mich.
- May-Fieberger Co., Newark, Ohio.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Portland Stove Foundry Co., Portland, Maine.
- Premier Furnace Co., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, Ohio.
- St. Clair Foundry Corp., Centralia, Ill.
- Schill Mfg. Co., Crestline, Ohio.
- Schwab Furnace Co., Milwaukee, Wis.
- Spear Stove & Heater Co., James, Philadelphia, Pa.
- Stiglitz Furnace & Foundry Co., Louisville, Ky.
- United States Radiator Corp., Detroit, Mich.
- Westwick & Son, Inc., John, Galena, Ill.
- Wise Furnace Co., Akron, Ohio.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Pipeless, Steel

- American Furnace & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Penn.
- Andrews Heating Co., Minneapolis, Minn.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.

- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Hart & Crouse Corp., Oneida, N. Y.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- International Heater Co., Utica, N. Y.
- Jackson & Church Co., Saginaw, Mich.
- Kehm Corp., Chicago, Ill.
- Keith Furnace Co., Des Moines, Iowa.
- Kelsey Heating Co., Syracuse, N. Y.
- Lennox Furnace Co., Marshalltown, Iowa.
- May-Fieberger Co., Newark, Ohio.
- Montag Stove & Furnace Works, Portland, Ore.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Nugent Furnaces, Thos., New York, N. Y.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Rosebraugh Co., W. W., Salem, Ore.
- Schwab Furnace Co., Milwaukee, Wis.
- Stiglitz Furnace & Foundry Co., Louisville, Ky.
- Thatcher Furnace Co., Garwood, N. J.
- United States Radiator Corp., Detroit, Mich.
- Waterman-Waterbury Co., Minneapolis, Minn.

Stoker, Cast Iron

- American Foundry & Furnace Co., Bloomington, Ill.
- Anchor Div., Stratton & Terstege Co., New Albany, Ind.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Keith Furnace Co., Des Moines, Iowa.
- Kelsey Heating Co., Inc., Syracuse, N. Y.
- Majestic Co., Huntington, Ind.
- Marshall Furnace Co., Marshall, Mich.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Premier Furnace Co., Dowagiac, Mich.

Stoker, Steel

- American Furnace Co., St. Louis, Mo.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Div., Stratton & Terstege Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis, Minn.
- Arccwell Mfg. Co., Seattle, Wash.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Campbell Heating Co., Des Moines, Iowa.
- Certified Furnace Co., St. Paul, Minn.
- Conco Engineering Works, Mendota, Ill.
- Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Jackson & Church Co., Saginaw, Mich.
- Keith Furnace Co., Des Moines, Iowa.
- Lennox Furnace Co., Marshalltown, Iowa.
- Majestic Co., Huntington, Ind.
- May-Fieberger Co., Newark, Ohio.
- Meyer Furnace Co., Peoria, Ill.
- Montag Stove & Furnace Co., Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Premier Furnace Co., Dowagiac, Mich.
- Rheem Manufacturing Co., New York, N. Y.
- Round Oak Co., Inc. of Ind., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, Ohio.
- St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Sun-Fire Stoker Corp., New Albany, Ind.
- Syncromatic Corp., Watertown, Wis.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Williamson Heater Co., Cincinnati, Ohio.

Wall

- A. C. Co., Los Angeles, Calif. (Gas)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Alcon Engineering Co., San Diego, Calif. (Gas)
- Andrews Heater Co., Los Angeles, Calif. (Gas)
- Beyer Oil Burner Co., Rosamond, Calif. (Oil)
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gas)
- Cirkla Products Div. Folsom Co., Inc., Dallas, Texas. (Nat. Gas)
- Commonwealth Co., Alhambra, Calif.
- Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
- Delta Heating Corp., Jackson Hts., L. I. N. Y. (Oil)
- Deluxe Furnace & Wall Heater Co., Inglewood, Calif. (Gas)
- Electromode Corp., Rochester, N. Y. (Electric)
- Folsom Co., Inc., Dallas, Texas. (Gas)
- Form-Weld Co., Inc., San Francisco, Calif. (LP, Nat. Gas)
- General Gas Light Co., Kalamazoo, Mich. (Gas)
- Hammel Radiator Engineering Co., Los Angeles, Calif. (Gas)
- Heating Equipment Mfg. Co., San Francisco, Calif. (Gas)
- Heating Research Corp., Muncie, Ind. (Gas)
- Hirsh Mfg. Co., Garland, Texas. (Gas & electric)
- Holly Mfg. Co., Pasadena, Calif. (Gas)
- Ideal Heating Corp., Los Angeles, Calif. (Gas)
- International Sales Co., San Francisco, Calif. (Gas)
- Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)
- Lawson Mfg. Co., Pittsburgh, Pa. (Gas)
- Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
- Mahl Mfg. Co., Huntington Park, Calif. (Gas)
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich. (Gas)
- Northwest Heating Inc., Portland, Ore.
- Northwest Metal Products, Inc., Seattle, Wash.
- O'Keefe & Merritt Co., Los Angeles, Calif. (Gas)
- Palmer Mfg. Corp., Phoenix, Ariz. (Gas)
- Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Pioneer Water Heater Corp., Los Angeles, Calif.
- Rheem Mfg. Co., New York, N. Y. (Gas)
- Royal Heaters, Inc., Alhambra, Calif. (Gas)
- Saintaire Co., Los Angeles, Calif. (Gas)
- South Wind Div., Stewart-Warner Corp., Indianapolis, Ind. (Gas)
- Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
- U-Ni-Matic Heating Systems, Inc., Los Angeles, Calif. (Gas)
- Universal Metal Products, Alhambra, Calif. (Gas)
- Utility Appliance Corp., Los Angeles, Calif. (Gas)
- Williams Radiator Co., Glendale, Calif. (Gas)
- Zink Co., John, Tulsa, Okla. (Nat. L. P. & Mfg. Gas)

Wood Burning, Cast Iron

- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- International Heater Co., Utica, N. Y.
- Keith Furnace Co., Des Moines, Iowa.
- MaGill Foundry & Furnace Co., Bloomington, Ill.
- Majestic Co., Huntington, Ind.
- Moncrief Furnace & Mfg. Co., Dallas, Texas.
- Montag Stove & Furnace Works, Portland, Ore.
- Portland Stove Foundry Co., Portland, Maine.
- Schwab Furnace Co., Milwaukee, Wis.

Wood Burning, Steel

- Andrews Heating Co., Minneapolis, Minn.
- Arcweld Mfg. Co., Inc., Seattle, Wash.
- Bovee Furnace Works, Waterloo, Iowa.
- Campbell Heating Co., Des Moines, Iowa.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Certified Furnace Co., St. Paul, Minn.
- Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Furblo Co., Hermansville, Mich.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Jackson & Church Co., Saginaw, Mich.
- Kleenair Furnace Co., Portland, Ore.
- Lennox Furnace Co., Marshalltown, Iowa.
- Mohawk Metal Products Co., Inc., Frankfort, N. Y.
- Moncrief Furnace & Mfg. Co., Dallas, Texas.
- Montag Stove & Furnace Works, Portland, Ore.
- National Heater Co., St. Paul, Minn.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Nugent Furnaces, Thomas, New York, N. Y.
- Rosebraugh Co., W. W., Salem, Ore.
- Sandberg Mfg. Co., Portland, Ore. (Sawdust)
- Syncromatic Corp., Watertown, Wis.

FURNACES, WINTER AIR CONDITIONING

Coal, Cast Iron

- Agricola Furnace Co., Inc., Gadsden, Ala.

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace & Foundry Co., Milan, Mich.
- Bovee Furnace Works, Waterloo, Iowa.
- Chandler Co., Cedar Rapids, Iowa.
- Crane Co., Chicago, Ill.
- Excelsior Steel Furnace Co., Chicago, Ill.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Farris Furnace Co., Springfield, Ill.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Henry Furnace Co., Medina, Ohio.
- Hess-Snyder Co., Massillon, Ohio.
- Home Furnace Co., Holland, Mich.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- International Heater Co., Utica, N. Y.
- Kehm Corp., Chicago, Ill.
- Keith Furnace Co., Des Moines, Iowa.
- Kelsey Heating Co., Inc., Syracuse, N. Y.
- MaGill Foundry & Furnace Co., Bloomington, Ill.
- Majestic Co., Huntington, Ind.
- Marshall Furnace Co., Marshall, Mich.
- May-Fieberger Co., Newark, Ohio.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- National Heater Co., St. Paul, Minn.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Premier Furnace Co., Dowagiac, Mich.
- Round Oak Co., Inc. of Ind., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, Ohio.
- Schill Mfg. Co., Crestline, Ohio.
- Schwab Furnace Co., Milwaukee, Wis.
- Spear Stove & Heater Co., James, Philadelphia, Pa.
- Union Mfg. Co., Inc., Boyertown, Pa.
- United States Radiator Corp., Detroit, Mich.
- Westwick & Son, Inc., John, Galena, Ill.
- Williamson Heater Co., Cincinnati, Ohio.
- Wise Furnace Co., Akron, Ohio.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Cool, Steel

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis, Minn.
- Arcweld Mfg. Co., Inc., Seattle, Wash.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Mfg. Co., Bryan, Ohio.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Bovee Furnace Works, Waterloo, Iowa.
- Campbell Heating Co., Des Moines, Iowa.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Certified Furnace Co., St. Paul, Mich.
- Coal-O-Matic Co., Trucksville, Pa.
- Conco Engineering Works, Mendota, Ill.
- Crane Co., Chicago, Ill.
- Deshler Foundry & Machine Works, Deshler, Ohio.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Dual-X Furnace Mfg. Co., Chicago, Ill.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Furblo Co., Hermansville, Mich.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hart & Crouse Corp., Oneida, N. Y.
- Heatlox Furnaces, Inc., Tacoma, Wash.
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Hess-Snyder Co., Massillon, Ohio.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- International Heater Co., Utica, N. Y.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Keith Furnace Co., Des Moines, Iowa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Kelsey Heating Co., Inc., Syracuse, N. Y.
- Kleenaif Furnace Co., Portland, Ore.
- Leeson Air Conditioning Corp., Detroit, Mich.
- Lennox Furnace Co., Marshalltown, Iowa.
- Locke Stove Co., Kansas City, Mo.
- Majestic Co., Huntington, Ind.
- May-Fieberger Co., Newark, Ohio.
- Meyer Furnace Co., Peoria, Ill.
- Mohawk Metal Products Co., Inc., Frankfort, N. Y.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., I. J., Milwaukee, Wis.
- National Heater Co., St. Paul, Minn.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Portland Stove Foundry Co., Portland, Maine.
- Premium Coal & Oil Co., Cincinnati, Ohio.
- Radiation Furnace Corp., Benton Harbor, Mich.
- Rosebraugh Co., W. W., Salem, Ore.
- Round Oak Co., Inc., of Ind., Dowagiac, Mich.
- Ruby Management Co., Pittsburgh, Pa.
- Rybolt Heater Co., Ashland, Ohio.
- St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Sandberg Mfg. Co., Portland, Ore.
- Schill Mfg. Co., Crestline, Ohio.
- Smith Heater Co., Peter, Dearborn, Mich.
- Souther Iron Co., E. E., St. Louis, Mo.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Synchronic Corp., Watertown, Wis.
- Thatcher Furnace Co., Garwood, N. J.
- Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
- United States Radiator Corp., Detroit, Mich.
- Viking Mfg. Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
- Westwick & Son, Inc., John, Galena, Ill.
- Williamson Heater Co., Cincinnati, Ohio.
- Wise Furnace Co., Akron, Ohio.

Electric

- Gray & Dudley Co., Nashville, Tenn. (basement, utility room)
- Heating Assurance, Inc., Spokane, Wash.
- Montag Stove & Furnace Works, Portland, Ore.
- Northwest Heating, Inc., Portland, Ore.

Gas, Cast Iron

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace Co., St. Louis, Mo.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Andrews Heating Co., Minneapolis, Minn.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Coroaire Heater Corp., Cleveland, Ohio.
- Evans Products Co., Plymouth, Mich.
- Firewel Co., Inc., Buffalo, N. Y.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- General Automatic Products Corp., Baltimore, Md.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Henry Furnace Co., Medina, Ohio.
- Hess-Snyder Co., Massillon, Ohio.
- International Heater Co., Utica, N. Y.
- Kelsey Heating Co., Inc., Syracuse, N. Y.
- McGill Foundry & Furnace Co., Bloomington, Ill.
- Marshall Furnace Co., Marshall, Mich.
- Moncrief Furnace & Mfg. Co., Dallas, Tex.
- Mueller Furnace Co., I. J., Milwaukee, Wis.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
- Rybolt Heater Co., Ashland, Ohio.
- Schwab Furnace Co., Milwaukee, Wis.
- Security Mfg. Co., Kansas City, Mo.
- Silver Flame Inc., Detroit, Mich.
- Sioux City Foundry & Boiler Co., Sioux City, Iowa.
- Surface Combustion Corp., Toledo, Ohio.
- Thatcher Furnace Co., Garwood, N. J.
- Twain City Gas Specialty Co., Minneapolis, Minn.
- Vacuum Gas Appliances, Div. Union Fork & Hoe Co., Rome, N. Y.
- Viking Mfg. Corp., Cleveland, Ohio.
- Wise Furnace Co., Akron, Ohio.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Gas, Steel

- Advance Furnace Co., Wichita, Kans.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Aladdin Heating Corp., Oakland, Calif.
- Allan Engineering Co., Walter, Dallas, Texas.
- American Furnace Co., St. Louis, Mo.
- American Radiator & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis, Minn.
- Andrews-Schroeder Heating Co., Glendale, Calif.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Auburn Burner Co., Auburn, Ind.
- Auburn Foundry, Inc., Stoker, Div., Auburn, Ind.
- Automatic Firing Corp., St. Louis, Mo.
- Automatic Furnace Co., Lansing, Mich.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Mfg. Co., Bryan, Ohio.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Brandes Co., Madison, Wis.
- Brown Steel Tank Co., Minneapolis, Minn.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
- Campbell Heating Co., Des Moines, Iowa.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Certified Furnace Co., St. Paul, Minn.
- Chimney-Furnace Corp., Rockville, Md. (Chimney)
- Coleman Co., Inc., Wichita, Kans.
- Conco Engineering Works, Mendota, Ill.
- Columbia Specialty Co., Inc., Chevy Chase, Md.
- Delco Appliance Div. General Motors Corp., Rochester, N. Y.
- Dornback Furnace & Foundry Co., Cleveland, Ohio.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Dualtron Co., Pittsburgh, Pa. (Equipped with electrostatic filter)
- Economy Gas Furnace Co., Chicago, Ill.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio
- Fraser and Johnston Co., Div. Liberty Foundry Co., San Francisco Calif.
- Front Rank Furnace Co., St. Louis, Mo.
- Gaul Air Conditioner Co., Dayton, Ohio.
- General Gas Light Co., Kalamazoo, Mich.
- Gillen Co., J. L., Dowagiac, Mich.
- Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
- Golden Gate Sheet Metal Works, Oakland, Calif.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hammel Radiator Engineering Co., Los Angeles, Calif.
- Harvey Whipple, Inc., Springfield, Mass.
- Hays Furnace & Mfg. Co., Los Angeles, Calif. (Duct)
- Heating Specialties Co., Baltimore, Md. (Stainless)
- Heat-Well Mfg. Co., Emeryville, Calif.
- Heil Co., Milwaukee, Wis.
- Henderson Furnace & Mfg. Co., Sebastopol, Calif.
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Hess-Snyder Co., Massillon, Ohio.
- Holly Mfg. Co., Pasadena, Calif.
- Huwer Heating Corp., Milford, Mich.
- Independence Stove & Furnace Co., Independence, Mo.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- International Oil Burner Co., St. Louis, Mo.
- International Sales Co., San Francisco, Calif.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Jet-Heat, Inc., Englewood, N. J.
- Johnson Heater Corp., Saugus, Mass.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kaustine Co., Inc., Perry, N. Y.
- Kehm Corp., Chicago, Ill.
- Keith Furnace Co., Des Moines, Iowa.
- Kleenaif Furnace Co., Portland, Ore.
- Ko-Z-Aire, Inc., Red Oak, Iowa.
- Leeson Air Conditioning Corp., Detroit, Mich.
- Lennox Furnace Co., Marshalltown, Iowa.
- Lundt, Inc., Ernest C., Little Falls, N. J.
- McDonald Mfg. Co., A. Y., Dubuque, Iowa.
- Majestic Co., Huntington, Ind.
- May-Fieberger Co., Newark, Ohio.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Metromatic Mfg. Co., Everett, Mass.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Meyer Furnace Co., Peoria, Ill.
- Miller-Special Gas Heating Co., Chicago, Ill.
- Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- National Heater Co., St. Paul, Minn.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Norman Products Co., Inc., Columbus, Ohio.
- Norwalk Air Conditioning Corp., South Norwalk, Conn.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Pacific Gas Heating Co., San Francisco, Calif.
- Patten Co., J. V., Sycamore, Ill.
- Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Peerless Foundry Co., Indianapolis, Ind.
- Peerless Sales & Supply, Lincoln, Nebr.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Perfection Stove Co., Cleveland, Ohio.
- Premier Furnace Co., Dowagiac, Mich.
- Radiation Furnace Corp., Benton Harbor, Mich.
- Rheem Mfg. Co., New York, N. Y.
- Richmond Radiator Co., Affil. Reynolds Metals Co., New York, N. Y.
- Roberts-Gordon Appliance Corp., Buffalo, N. Y.
- Round Oak Co., Inc. of Ind., Dowagiac, Mich.
- Royal Heaters, Inc., Alhambra, Calif.
- Ruby Management Co., Pittsburgh, Pa.
- Rudy Mfg. Co., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, Ohio.
- St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Schill Mfg. Co., Crestline, Ohio.
- Security Mfg. Co., Kansas City, Mo.
- Sequoia Mfg. Co., San Carlos, Calif.
- Silver Flame Industries, Inc., Detroit, Mich.
- State Steel Products, Inc., Los Angeles, Calif.
- Steel City Furnace Co., Springdale, Pa. (Equipped with electrostatic air filter)
- Sure Comfort Furnace Co., Forest Park, Ill.
- Syncromatic Corp., Watertown, Wis.
- Thatcher Furnace Co., Garwood, N. J.
- Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
- Tjernlund Mfg. Co., St. Paul, Minn.
- Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
- Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
- U-Ni-Matic Heating Systems, Inc., Los Angeles, Calif.
- United States Radiator Corp., Detroit, Mich.
- Utility Appliance Corp., Los Angeles, Calif.
- Viking Mfg. Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Wayne Home Equipment Co., Fort Wayne, Ind.
- Williamson Heater Co., Cincinnati, Ohio.
- Wise Furnace Co., Akron, Ohio.
- York-Shipley, Inc., York, Pa.
- Zick Sheet Metal Works, Dearborn, Mich.

Gas-Oil, Combination, Cast Iron

- American Foundry & Furnace Co., Bloomington, Ill.

Gas-Oil, Combination, Steel

- Automatic Firing Corp., St. Louis, Mo.
- Campbell Heating Co., Des Moines, Iowa.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Henry Furnace Co., Medina, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Meyer Furnace Co., Peoria, Ill.
- National Heater Co., St. Paul, Minn.
- Roberts-Gordon Appliance Corp., Buffalo, N. Y.

Oil, Cast Iron

- American Foundry & Furnace Co., Bloomington, Ill.
- Excelsior Steel Furnace Co., Chicago, Ill.
- International Heater Co., Utica, N. Y.
- Keith Furnace Co., Des Moines, Iowa.
- Kelsey Heating Co., Inc., Syracuse, N. Y.
- Livingston, Inc., Marshall, Mich.
- McGill Foundry & Furnace Co., Bloomington, Ill.
- Marshall Furnace Co., Marshall, Mich.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Portland Stove Foundry Co., Portland, Me.
- Ruby Management Co., Pittsburgh, Pa.
- Schwab Furnace Co., Milwaukee, Wis.
- Westwick & Son, Inc., John, Galena, Ill.
- Wise Furnace Co., Akron, Ohio.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Oil, Steel

- Airwasher Corp., Eaton Rapids, Mich.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Gas Machine Co., Albert Lea, Minn.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- American Stove Co., Lorain Div., St. Louis, Mo.
- Anchor Div., Stratton & Tenetee Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis, Minn.
- Arcweld Mfg. Co., Seattle, Wash.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Associates Engineering Co., Buffalo, N. Y.
- Auburn Burner Co., Auburn, Ind.
- Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
- Auto-Heat Corp., Middletown, Conn.
- Automatic Firing Corp., St. Louis, Mo.
- Automatic Furnace Co., Lansing, Mich.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Mfg. Co., Bryan, Ohio.
- Beck Engineering Combustion Company, St. Louis, Mo.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Bovee Furnace Works, Waterloo, Iowa.
- Brandes Co., Madison, Wis.
- Brander & Co., Inc., Jacob, Fond du Lac, Wis.
- Brown Steel Tank Co., Minneapolis, Minn.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Campbell Heating Co., Des Moines, Iowa.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Cary Mfg. Co., Waupaca, Wis.
- Castle Industries Co., Inc., Yonkers, N. Y.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Certified Furnace Co., St. Paul, Minn.
- Chandler Co., Cedar Rapids, Iowa.
- Chicago Steel Furnace Co., Chicago, Ill.
- Chimney-Furnace Corp., Rockville, Md.
- Coleman Co., Inc., Wichita, Kans.
- Columbia Specialty Co., Inc., Chevy Chase, Md.
- Conco Engineering Works, Mendota, Ill.
- Crane Co., Chicago, Ill.
- Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
- Delco Appliance Div., General Motors Corp., Rochester, N. Y.
- Demuth & Sons, Inc., Charles, Mineola, L. I., N. Y.
- Desher Foundry & Machine Works, Desher, Ohio.
- Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
- Domestic Mfg. Co., Seattle, Wash.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Dualflame Div., H. & K. Appliance Co., Lima, Ohio. (With integral domestic water heating unit)
- Dushtron Co., Pittsburgh, Pa. (Equipped with electrostatic filter)
- Dual-X Furnace Mfg. Co., Chicago, Ill.
- Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
- Evans Products Co., Plymouth, Mich.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Furbo Co., Hermannville, Mich.
- General Automatic Products Corp., Baltimore, Md.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- Gilbert & Barker Mfg. Co., West Springfield, Mass.
- Gillen Co., J. L., Dowagiac, Mich.
- Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hart & Crouse Corp., Oneida, N. Y.
- Harvey-Whipple, Inc., Springfield, Mass.
- Heating Specialties Co., Baltimore, Md. (Stainless).
- Heatlox Furnaces, Inc., Tacoma, Wash.
- Heil Co., Milwaukee, Wis.
- Henry Furnace Co., Medina, Ohio.
- Hershey Machine & Foundry Co., Manheim, Pa.
- Hess Co., Chicago, Ill.
- Hess-Snyder Co., Massillon, Ohio.
- Home Furnace Co., Holland, Mich.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- Hotentot Co., Inc., Omaha, Nebr.
- Huwer Heating Corp., Milford, Mich.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- International Heater Co., Utica, N. Y.
- International Oil Burner Co., St. Louis, Mo.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- International Sales Co., San Francisco, Calif.
 Iron Fireman Mfg. Co., Cleveland, Ohio.
 Jackson & Church Co., Saginaw, Mich.
 Jennings, Freeland L., Lima, Ohio. (With integral domestic water heating unit)
 Jet-Heat, Inc., Englewood, N. J.
 Johnson Co., S. T., Oakland, Calif., and Philadelphia, Pa.
 Johnson Heater Corp., Saugus, Mass.
 Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
 • Kaustine Co., Inc., Perry, N. Y.
 Keith Furnace Co., Des Moines, Iowa.
 Kelsey Heating Co., Inc., Syracuse, N. Y.
 Kleenair Furnace Co., Portland, Ore.
 • Ke-Z-Aire Inc., Red Oak, Iowa.
 Kresky Mfg. Co., Inc., Petaluma, Calif.
 Laco Oil Burner Co., Inc., Griswold, Iowa.
 Leeson Air Conditioning Corp., Detroit, Mich.
 Lennox Furnace Co., Marshalltown, Iowa.
 Little Burner Co., Inc., H. C., San Rafael, Calif.
 Lochinvar Products Div., Dearborn, Mich.
 Lundt, Inc., Ernest C., Little Falls, N. J.
 Luty Furnace Mfg. Co., Detroit, Mich.
 McKee Air Conditioning Co., Minneapolis, Minn.
 McPherson Furnace & Supply Co., Portland, Ore.
 • Majestic Co., Huntington, Ind.
 • May-Fieberger Co., Newark, Ohio.
 • Mayflower Air Conditioners, Inc., St. Paul, Minn.
 May Oil Burner Div. Gerotor May Corp., Baltimore, Md.
 • Metromatic Mfg. Co., Everett, Mass.
 • Meyer Furnace Co., Peoria, Ill.
 Mohawk Metal Products Co., Inc., Frankfort, N. Y.
 Montag Stove & Furnace Works, Portland, Ore.
 • Morrison Steel Products, Inc., Buffalo, N. Y.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 • National Heater Co., St. Paul, Minn.
 • Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
 Northwest Foundry & Furnace Co., Portland, Ore.
 Norwalk Air Conditioning Corp., South Norwalk, Conn.
 • Nu-Way Corp., Rock Island, Ill.
 • Olsen Mfg. Co., C. A., Elyria, Ohio.
 Omaha Stove Repair Works, Inc., Omaha, Nebr.
 Pacific Gas Heating Co., San Francisco, Calif.
 Paragon Oil Burner Corp., Brooklyn, N. Y.
 • Patten Co., J. V., Sycamore, Ill.
 • Peerless Foundry Co., Indianapolis, Ind.
 Peerless Sales & Supply, Lincoln, Nebr.
 Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
 • Perfection Stove Co., Cleveland, Ohio.
 Petroleum Heat & Power Co., Stamford, Conn.
 • Premier Furnace Co., Dowagiac, Mich.
 Premium Coal & Oil Co., Cincinnati, Ohio.
 Queen Stove Works, Inc., Albert Lea, Minn.
 Quick Furnace & Supply Co., Des Moines, Iowa.
 • Quiet Automatic Burner Corp., Newark, N. J.
 Radiation Furnace Corp., Benton Harbor, Mich.
 Rapid Heat Corp., Detroit, Mich.
 Ray Oil Burner Co., San Francisco, Calif.
 Reif-Rexoil, Inc., Buffalo, N. Y.
 Republic Products Co., Philadelphia, Pa.
 • Richmond Radiator Co., Affil. Reynolds Metals Co., New York, N. Y.
 Rosebraugh Co., W. W., Salem, Ore.
 • Round Oak Co., Inc. of Ind., Dowagiac, Mich.
 Ruby Management Co., Pittsburgh, Pa.
 Rudy Mfg. Co., Dowagiac, Mich.
 • Rybolt Heater Co., Ashland, Ohio.
 St. Louis Furnace Mfg. Co., St. Louis, Mo.
 Sandberg Mfg. Co., Portland, Ore.
 Schill Mfg. Co., Crestline, Ohio.
 • Schwab Furnace Co., Milwaukee, Wis.
 Silent Sioux Oil Burner Corp., Orange City, Iowa.
 Silver Flame Industries, Inc., Detroit, Mich.
 Standard Heating Equipment Co., Waterloo, Iowa.
 • Sundstrand Engineering Co., Rockford, Ill.
 Sure Comfort Furnace Co., Forest Park, Ill.
 Sun-Fire Stoker Corp., New Albany, Ind.
 • Syncromatic Corp., Watertown, Wis.
 • Thatcher Furnace Co., Garwood, N. J.
 Thermo-Products, Inc., North Judson, Ind.
 Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
 Tiernlund Mfg. Co., St. Paul, Minn.
 • Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
 Tru-Heat Co., Trenton, N. J.
 Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
 United Air Heaters, Inc., Seattle, Wash.
 United States Radiator Corp., Detroit, Mich.
 Viking Mfg. Corp., Cleveland, Ohio.
 • Waterman-Waterbury Co., Minneapolis, Minn.
 Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
 Weatherall Engineers, Inc., Providence, R. I.
 Westwick & Son, Inc., John, Galena, Ill.
 • Williams Oil-O-Matic Div., Eureka Williams Corp., Bloomington, Ill.
 • Williamson Heater Co., Cincinnati, Ohio.
 York-ShIPLEY, Inc., York, Pa.
 Zick Sheet Metal Works, Dearborn, Mich.
- Stoker, Cast Iron**
- American Foundry & Furnace Co., Bloomington, Ill.
 Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
 Crane Co., Chicago, Ill.
 Excelsior Stove & Mfg. Co., Quincy, Ill.
 • Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
 Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
 Gross-Air Mfg. Co., St. Louis, Mo.
 Keith Furnace Co., Des Moines, Iowa.
 MaGirl Foundry & Furnace Co., Bloomington, Ill.
 Marshall Furnace Co., Marshall, Mich.
 Montag Stove & Furnace Works, Portland, Ore.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 Omaha Stove Repair Works, Inc., Omaha, Nebr.
 Stokol Stoker Co., Inc., Dayton, Ohio.
 • Williamson Heater Co., Cincinnati, Ohio.
- Stoker, Steel**
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
 • American Furnace & Foundry Co., Milan, Mich.
 • American Furnace Co., St. Louis, Mo.
 • American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 • Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
 Andrews Heating Co., Minneapolis, Minn.
 Arcweld Mfg. Co., Inc., Seattle, Wash.
 • Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
 Auburn Burner Co., Auburn, Ind.
 Automatic Firing Corp., St. Louis, Mo.
 Bard Mfg. Co., Bryan, Ohio.
 Beck Engineering Combustion Company, St. Louis, Mo.
 Campbell Heating Co., Des Moines, Iowa.
 Campbell Heating Co., E. K., Kansas City, Mo.
 Certified Furnace Co., St. Paul, Minn.
 Chicago Steel Furnace Co., Chicago, Ill.
 • Conco Engineering Works, Mendota, Ill.
 Crane Co., Chicago, Ill.
 Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
 Deshler Foundry & Machine Works, Deshler, Ohio.
 • Dowagiac Steel Furnace Co., Dowagiac, Mich.
 Electric Furnace-Man, Inc., Emmaus, Pa.
 Farquhar Furnace Co., Wilmington, Ohio.
 Fairbanks, Morse & Co., Chicago, Ill.
 • Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
 Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
 Furblo Co., Hermansville, Mich.
 Gross-Air Mfg. Co., St. Louis, Mo.
 • Hall-Neal Furnace Co., Indianapolis, Ind.
 Heatlox Furnaces, Inc., Tacoma, Wash.
 Hershey Machine & Foundry Co., Manheim, Pa.
 • Hess Co., Chicago, Ill.
 Iron Fireman Mfg. Co., Cleveland, Ohio.
 Jackson & Church Co., Saginaw, Mich.
 Keith Furnace Co., Des Moines, Iowa.
 Lennox Furnace Co., Marshalltown, Iowa.
 • Majestic Co., Huntington, Ind.
 • May-Fieberger Co., Newark, Ohio.
 • Meyer Furnace Co., Peoria, Ill.
 Montag Stove & Furnace Works, Portland, Ore.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 • National Heater Co., St. Paul, Minn.
 Northwest Foundry & Furnace Co., Portland, Ore.
 • Olsen Mfg. Co., C. A., Elyria, Ohio.
 Pocahontas Fuel Co., Inc., Stoker Div., Cleveland, Ohio.
 Rosebraugh Co., W. W., Salem, Ore.
 • Round Oak Co., Inc. of Ind., Dowagiac, Mich.
 • Rybolt Heater Co., Ashland, Ohio.
 St. Louis Furnace Mfg. Co., St. Louis, Mo.
 Sandberg Mfg. Co., Portland, Ore.
 Sun-Fire Stoker Corp., New Albany, Ind.
 • Syncromatic Corp., Watertown, Wis.
 • Waterman-Waterbury Co., Minneapolis, Minn.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Williamson Heater Co., Cincinnati, Ohio.

Suspended Type

- Allan Engineering Co., Walter, Dallas, Texas.
- American Furnace Co., St. Louis, Mo. (Gas & oil)
- Auburn Burner Co., Auburn, Ind. (Oil)
- Auburn Foundry, Inc., Stoker Div., Auburn, Ind. (Oil)
- Automatic Gas Equipment Co., Pittsburgh, Pa. (Gas)
- Barwick Mfg. Corp., Wichita, Kans. (Nat. mfg. & mixed)
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gas)
- Central States Mfg. Co., Inc., Arkansas City, Kans.
- Chicago Steel Furnace Co., Chicago, Ill. (Oil & Gas)
- Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
- Fairbanks, Morse & Co., Chicago, Ill. (Oil)
- Firewel Co., Inc., Buffalo, N. Y. (Gas)
- Fraser & Johnston Co., San Francisco, Calif.
- General Gas Light Co., Kalamazoo, Mich. (Gas)
- Gilbert & Barker Mfg. Co., West Springfield, Mass. (Oil)
- Great National Air Conditioning Corp., Oklahoma City, Okla.
- International Sales Co., San Francisco, Calif. (Gas)
- Jackson & Church Co., Saginaw, Mich. (Oil & gas)
- Jet-Heat, Inc., Englewood, N. J. (Gas & Oil)
- Lennox Furnace Co., Marshalltown, Iowa (Gas)
- Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
- Meyer Furnace Company, Peoria, Ill. (Gas)
- Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas)
- National Heater Co., St. Paul, Minn. (Oil & gas)
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich. (Gas & Oil)
- Norman Products Co., Inc., Columbus, Ohio.
- Overhead Heaters, Inc., Detroit, Mich. (Oil)
- Palmer Mfg. Corp., Phoenix, Ariz. (Gas)
- Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
- Perfection Stove Co., Cleveland, Ohio. (Oil)
- Prat-Daniel Corp., East Port Chester, Conn. (Gas & oil)
- Quiet Automatic Burner Corp., Newark, N. J.
- Reznor Mfg. Co., Mercer, Pa. (Gas)
- Sequoia Mfg. Co., San Carlos, Calif.
- Silver Flame Industries, Inc., Detroit, Mich. (Oil)
- South Wind Div. Stewart-Warner Corp., Indianapolis, Ind.
- Surface Combustion Corp., Toledo, Ohio. (Gas)
- Turb-O-Tube Furnace, Inc., Buffalo, N. Y. (Oil)
- United Machine Works, Inc., Los Angeles, Calif.
- United States Radiator Corp., Detroit, Mich. (Gas)
- Williams Oil-O-Matic Div. Eureka-Williams Corp., Bloomington, Ill. (Oil)
- Zink Co., John, Tulsa, Okla. (Nat. L. P. & Mfg. Gas)

Utility Room, Cool, Steel

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Bard Mfg. Co., Bryan, Ohio.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Jackson & Church Co., Saginaw, Mich.
- Kehm Corp., Chicago, Ill.
- Lennox Furnace Co., Marshalltown, Iowa.
- Locke Stove Co., Kansas City, Mo.
- Montag Stove & Furnace Works, Portland, Ore.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Peerless Foundry Co., Indianapolis, Ind.
- Smith Heater Co., Peter, Dearborn, Mich.

Utility Room, Gas, Cast Iron

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Foundry & Furnace Co., Bloomington, Ill.
- Corosaire Heater Corp., Cleveland, Ohio.
- Firewel Co., Inc., Buffalo, N. Y.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- Henry Furnace Co., Medina, Ohio.
- International Oil Burner Co., St. Louis, Mo.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
- Rybolt Heater Co., Ashland, Ohio.
- Security Mfg. Co., Kansas City, Mo.
- Silver Flame, Inc., Detroit, Mich.
- Surface Combustion Corp., Toledo, Ohio.
- Twin City Gas Specialty Co., Minneapolis, Minn.
- Vacuum Gas Appliances Div. Union Fork & Hoe Co., Rome, N. Y.

Williamson Heater Co., Cincinnati, Ohio.

Utility Room, Gas, Steel

- Advance Furnace Co., Wichita, Kans.
- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Aladdin Heating Corp., Oakland, Calif.

- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Auburn Burner Co., Auburn, Ind.
- Bard Mfg. Co., Bryan, Ohio.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Brandes Co., Madison, Wis.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Coleman Co., Inc., Wichita, Kans.
- Dalzen Tool & Mfg. Co., Detroit, Mich.
- Delco Appliance Div., General Motors Corp., Rochester, N. Y.
- Evans Products Co., Plymouth, Mich.
- Fairbanks, Morse & Co., Chicago, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
- Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
- Fraser & Johnston Co., San Francisco, Calif.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- General Gas Light Co., Kalamazoo, Mich.
- Golden Gate Sheet Metal Works, Oakland, Calif.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hammel Radiator Engineering Co., Los Angeles, Calif.
- Heating Equipment Mfg. Co., San Francisco, Calif.
- Henderson Furnace & Mfg. Co., Sebastopol, Calif.
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Huwer Heating Corp., Milford, Mich.
- Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Jet-Heat, Inc., Englewood, N. J.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kaustine Co., Inc., Perry, N. Y.
- Kehm Corp., Chicago, Ill.
- Ko-Z-Aire, Inc., Red Oak, Iowa.
- Leeson Air Conditioning Corp., Detroit, Mich.
- Lennox Furnace Co., Marshalltown, Iowa.
- Lundt, Inc., Ernest C., Little Falls, N. J.
- Majestic Co., Huntington, Ind.
- May-Fieberger Co., Newark, Ohio.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Norman Products Co., Inc., Columbus, Ohio.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Pacific Gas Heating Co., San Francisco, Calif.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Patten Co., J. V., Sycamore, Ill.
- Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Peerless Foundry Co., Indianapolis, Ind.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Perfection Stove Co., Cleveland, Ohio.
- Radiation Furnace Corp., Benton Harbor, Mich.
- Rheem Mfg. Co., New York, N. Y.
- Richmond Radiator Co., Aff. Reynolds Metals Co., New York, N. Y.
- Round Oak Co. of Indiana, Dowagiac, Mich.
- Ruby Management Co., Pittsburgh, Pa.
- Rybolt Heater Co., Ashland, Ohio.
- St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Scott-Newcomb, Inc., St. Louis, Mo.
- Security Mfg. Co., Kansas City, Mo.
- Sequoia Mfg. Co., San Carlos, Calif.
- Silver Flame Industries, Inc., Detroit, Mich.
- Steel City Furnace Co., Springdale, Pa.
- Stokol Stoker Co., Inc., Dayton, Ohio.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Synchronic Corp., Watertown, Wis.
- Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
- Toridheat Div. Cleveland Steel Products Corp., Cleveland, Ohio.
- Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
- United States Radiator Corp., Detroit, Mich.
- Viking Mfg. Corp., Cleveland, Ohio.
- Wayne Home Equipment Co., Inc., Fort Wayne, Ind.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Williamson Heater Co., Cincinnati, Ohio.
- York-Shipley, Inc., York, Pa.

Utility Room, Gas-Oil Combination, Steel

- Century Engineering Corp., Cedar Rapids, Iowa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Henry Furnace Co., Medina, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Meyer Furnace Co., Peoria, Ill.
- Norman Products Co., Inc., Columbus, Ohio.

Utility Room, Oil, Cast Iron

- Westwick & Son, Inc., John, Galena, Ill.

Utility Room, Oil, Steel

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Furnace Co., St. Louis, Mo.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- American Stove Co., Lorain Div., St. Louis, Mo.
- Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa.
- Anchor Div. Stratton & Terstegge Co., New Albany, Ind.
- Auburn Burner Co., Auburn, Ind.
- Automatic Furnace Co., Lansing, Mich.
- Bard Mfg. Co., Bryan, Ohio.
- Benner-Nawman, Inc., Oakland, Calif.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Brandes Co., Madison, Wis.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Calimode, Inc., Atlanta, Ga.
- Cary Mfg. Co., Waupaca, Wis.
- Castle Industries Co., Inc., Yonkers, N. Y.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Coleman Co., Inc., Wichita, Kans.
- Conco Engineering Works, Mendota, Ill.
- Crane Co., Chicago, Ill.
- Delta Heating Corp., Jackson Hts., L. I., N. Y.
- Domestic Mfg. Co., Seattle, Wash.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Dual-X Furnace Mfg. Co., Chicago, Ill.
- Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Evans Products Co., Plymouth, Mich.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- General Electric Co., Automatic Heating Div., Bloomfield, N. J.
- Gilbert & Barker Mfg. Co., West Springfield, Mass.
- Gillen Co., J. L., Dowagiac, Mich.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Harvey-Whipple, Inc., Springfield, Mass.
- Henry Furnace Co., Medina, Ohio.
- Hess Co., Chicago, Ill.
- Huwer Heating Corp., Milford, Mich.
- International Oil Burner Co., St. Louis, Mo.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Jet-Heat, Inc., Englewood, N. J.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kaustine Co., Inc., Perry, N.Y.
- Kehm Corp., Chicago, Ill.
- Ko-Z-Aire, Inc., Red Oak, Iowa.
- Kresky Mfg. Co., Petaluma, Calif.
- Laco Oil Burner Co., Inc., Griswold, Iowa.
- Leeson Air Conditioning Corp., Detroit, Mich.
- Lennox Furnace Co., Marshalltown, Iowa.
- Little Burner Co., Inc., H. C., San Rafael, Calif.
- Lundt, Inc., Ernest C., Little Falls, N. J.
- McPherson Furnace & Supply Co., Portland, Ore.
- Majestic Co., Huntington, Ind.
- May-Fieberger Co., Newark, Ohio.
- May Oil Burner Div. Gerotor May Corp., Baltimore, Md.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Montag Stove & Furnace Works, Portland, Ore.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Northwest Foundry & Furnace Co., Portland, Ore.
- Northwest Metal Products, Inc., Seattle, Wash.
- Olsen Mfg. Co., C. A., Elyria, Ohio.
- Omaha Stove Repair Works, Inc., Omaha, Neb.
- Paragon Oil Burner Corp., Brooklyn, N. Y.
- Patten Co., J. V., Sycamore, Ill.

- Peerless Foundry Co., Indianapolis, Ind.
 - Perfection Stove Co., Cleveland, Ohio.
 - Premier Furnace Co., Dowagiac, Mich.
 - Radiation Furnace Corp., Benton Harbor, Mich.
 - Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
 - Ruby Management Co., Pittsburgh, Pa.
 - Rybolt Heater Co., Ashland, Ohio.
 - St. Louis Furnace Mfg. Co., St. Louis, Mo.
 - Sandberg Mfg. Co., Portland, Ore.
 - Scott-Newcomb, Inc., St. Louis, Mo.
 - Silent Sioux Oil Burner Corp., Orange City, Iowa.
 - Silver Flame Industries, Inc., Detroit, Mich.
 - Smith Heater Co., Peter, Dearborn, Mich.
 - Stokol Stoker Co., Inc., Dayton, Ohio.
 - Sure Comfort Furnace Co., Forest Park, Ill.
 - Syncromatic Corp., Watertown, Wis.
 - Thermo-Products, Inc., North Judson, Ind.
 - Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
 - Tjernlund Mfg. Co., St. Paul, Minn.
 - Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
 - United States Radiator Corp., Detroit, Mich.
 - Viking Mfg. Corp., Cleveland, Ohio.
 - Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
 - Weatherall Engineers, Inc., Providence, R. I.
 - Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
 - York-Shipley, Inc., York, Pa.
- 500,000 Btu and up**
- Airtherm Mfg. Co., St. Louis, Mo.
 - American Foundry & Furnace Co., Bloomington, Ill. (Coal, oil, gas)
 - American Furnace & Foundry Co., Milan, Mich.
 - American Furnace Co., St. Louis, Mo.
 - Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
 - Andrews Heating Co., Minneapolis, Minn.
 - Armstrong Furnace Co., Columbus, Ohio & Des Moines, Iowa. (Coal)
 - Arcweld Mfg. Co., Inc., Seattle, Wash.
 - Beck Engineering Combustion Company, St. Louis, Mo. (Coal, oil & gas)
 - Calimode, Inc., Atlanta, Ga. (Oil)
 - Campbell Heating Co., Des Moines, Iowa. (Gas, oil & coal)
 - Campbell Heating Co., E. K., Kansas City, Mo.
 - Certified Furnace Co., Div. Stainless & Steel Products Co., St. Paul, Minn.
 - Chicago Steel Furnace Co., Chicago, Ill. (Gas & oil)
 - Columbus Heating & Ventilating Co., Columbus, Ohio.
 - Demuth & Sons, Inc., Charles, Mineola, L. I. N. Y. (Oil)
 - Dravo Corp., Pittsburgh, Pa. (Oil, gas & coal)
 - Favorite Stove Co., Piqua, Ohio. (Coal)
 - Floral City Heater Co., Monroe, Mich. (Coal)
 - International Sales Co., San Francisco, Calif. (Gas)
 - Jackson & Church Co., Saginaw, Mich. (Coal, oil & gas)
 - Keith Furnace Co., Des Moines, Iowa. (Oil)
 - Lee Engineering Co., Hoboken, N. J. (Hand & stoker-oil, gas, comb. oil-gas)
 - Lennox Furnace Co., Marshalltown, Iowa. (Gas & coal)
 - Lundt, Inc., Ernest C., Little Falls, N. J. (Gas-oil)
 - MaGill Foundry & Furnace Co., Bloomington, Ill. (Gas, oil, coal)
 - Majestic Co., Huntington, Ind. (Oil & gas)
 - McPherson Furnace & Supply Co., Portland, Ore. (Oil & Coal)
 - Meyer Furnace Co., Peoria, Ill. (Coal, oil & gas)
 - Mueller Furnace Co., L. J., Milwaukee, Wis. (Coal, oil & gas)
 - National Heater Co., St. Paul, Minn. (Coal, oil, gas; gas-oil comb.)
 - Northwest Foundry & Furnace Co., Portland, Ore. (Coal & oil)
 - Norwalk Air Conditioning Corp., South Norwalk, Conn. (Oil)
 - Olson & Co., Arthur A., Canfield, Ohio. (Oil, gas, stoker, comb. gas-oil)
 - Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
 - Peerless Foundry Co., Indianapolis, Ind.
 - Pennsylvania Furnace & Iron Co., Warren, Pa. (Gas)
 - Prat-Daniel Corp., East Port Chester, Conn. (Gas-oil)
 - Rosebraugh Co., W. W., Salem, Ore.
 - Round Oak Co., Inc., of Indiana, Dowagiac, Mich. (Coal & oil)
 - St. Louis Furnace Mfg. Co., St. Louis, Mo. (Coal & oil)
 - Sandberg Mfg. Co., Portland, Ore. (Coal & oil)
 - Surface Combustion Corp., Toledo, Ohio. (Gas)
 - Syncromatic Corp., Watertown, Wis. (Oil, coal, gas)
 - Vacuum Gas Appliances, Div. Union Fork & Hoe Co., Rome, N. Y. (Gas)
 - Weatherall Engineers, Inc., Providence, R. I.
 - XXth Century Heating & Ventilating Co., Akron, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

GAS BURNERS

See Burners, Gas

GAS BURNER CONTROLS

See Controls; Control Systems

GATES, BLAST

See Blast Gates

GAUGES, DRAFT, INDICATING, PORTABLE

- Bacharach Industrial Instrument Co., Pittsburgh, Pa.
- Bristol Co., Waterbury, Conn.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Detroit Air Conditioning Service Co., Detroit, Mich.
- Dwyer Mfg. Co., F. W., Chicago, Ill.
- Ellison Draft Gage Co., Chicago, Ill.
- Foxboro Co., Foxboro, Mass.
- Hays Corp., Michigan City, Ind.
- Hill & Co., E. Vernon, Chicago, Ill.
- Meriam Instrument Co., Cleveland, Ohio.
- Moeller Instrument Co., Richmond Hill, N. Y.
- Perfex Corp., Milwaukee, Wis.
- Precision Thermometer & Instrument Co., Philadelphia, Pa.
- Preferred Utilities Mfg. Corp., New York, N. Y.
- Uehling Instrument Co., Paterson, N. J.

GAUGES, TANK, FUEL OIL

- Applied Mechanics Co., Boston, Mass.
- B & K Tank Gauge Corp., Paterson, N. J.
- Barclay Co., Robt., Chicago, Ill.
- Bearlee Products Co., Green Bay, Wis.
- Boston Machine Works Co., Lynn, Mass.
- Hasko Utilities Co., New York, N. Y.
- Jessup Signal Gauge Co., Minneapolis, Minn.
- Krueger Sentry Gauge Co., Green Bay, Wis.
- Liquidometer Corp., Long Island City, N. Y.
- Mel-Gauge Co., New Haven, Conn.
- Morse-Smith-Morse, Inc., Watertown, Mass.
- Oil Equipment Mfg. Co., New Haven, Conn.
- Petrometer Corp., Long Island City, N. Y.
- Rochester Mfg. Co., Inc., Rochester, N. Y.
- Scully Signal Co., Cambridge, Mass.
- Uehling Instrument Co., Paterson, N. J.

GLASS, WIRE, FOR SKYLIGHTS

- Atcheson Glass Co., T. J., Buffalo, N. Y.
- Bache & Co., Semon, New York, N. Y.
- Libbey-Owens-Ford Glass Co., Toledo, Ohio.
- Pennsylvania Wire Glass Co., Philadelphia, Pa. (Corrugated wire)
- Pittsburgh Plate Glass Co., Pittsburgh, Pa.
- Richards, J. Merrill, Boston, Mass.
- Robertson Co., H. H., Pittsburgh, Pa.

GRAVITY FURNACES

See Furnaces, Warm Air, Gravity

GREASE FILTERS

See Filters, Grease

GRILLES, HEATING AND VENTILATING

Also See Faces and Registers

- A & A Register Co., Cleveland, Ohio.
- A-J Mfg. Co., Kansas City, Mo.
- Acme Mfg. Co., Philadelphia, Pa.
- Acme Wire & Iron Works, Detroit, Mich.
- Air Control Products, Inc., Coopersville, Mich.
- Alton Mfg. Co., Dallas, Texas.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Warming & Ventilating Co., Toledo, Ohio.
- Auer Register Co., Cleveland, Ohio.
- Barber-Colman Co., Rockford, Ill.
- Beckley Perforating Co., Garwood, N. J.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Best Register Co., Milwaukee, Wis.
- Controlair Mfg. Co., Los Angeles, Calif.
- Diamond Mfg. Co., Wyoming, Pa.
- Erdle Perforating Co., Rochester, N. Y.
- Greenberg's Sons, M., San Francisco, Calif.
- Harrington & King Perforating Co., Chicago, Ill.
- Harrison Sheet Steel Co., Chicago, Ill.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Hendrick Mfg. Co., Carbondale, Pa.
- Independent Register Co., Cleveland, Ohio.
- Johnston & Chapman Co., Chicago, Ill.

- Lima Register Co., Lima, Ohio.
- Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
- Metal Carrier Corp., Grand Rapids, Mich.
- Midco Register Corp., St. Paul, Minn.
- Mundt & Sons, Charles, Jersey City, N. J.
- Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
- Rock Island Register Co., Rock Island, Ill.
- Smith Co., J. B., Philadelphia, Pa.
- Stewart Mfg. Co., Cedar Grove, N. J.
- Titus Mfg. Corp., Waterloo, Iowa.
- Tuttle & Bailey, Inc., New Britain, Conn.
- U.S. Air Conditioning Corp., Minneapolis, Minn.
- United States Register Co., Battle Creek, Mich.

GRINDERS, BUFFERS, POLISHERS AND SANDERS

See Buffers, Grinders, Polishers and Sanders

GROOVING MACHINES

See Machines, Grooving

GUARDS, SNOW

- Barnard Co., Geo. A., Worcester, Mass.
- Berger Bros. Co., Philadelphia, Pa.
- Cartier & Sons Co., M. N., Providence, R. I.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Cromley's, Lewisburg, Pa. (For slate & standing seam roofs)
- Danzer Metal Works Co., Hagerstown, Md. (All types).
- Downs-Smith Brass & Copper Co., New York, N. Y.
- Folsom Snow Guard Co., Millis, Mass.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Levow, David, New York, N. Y.
- Maysteel Products, Inc., Milwaukee, Wis.
- Obdyke, Inc., Philadelphia, Pa.
- Royal-Apex Mfg. Corp., Brooklyn, N. Y.

GUNS

Rivet

- Cherry Rivet Co., Los Angeles, Calif. (Blind rivet)
- Chicago Pneumatic Tool Co., New York, N. Y.

Soot

- Miller Products Co., Lansing, Mich.
- S. O. S. Products Co., Inc., Brooklyn, N. Y.

Spray, Metal

- Schori Process, Div. Ferro-Co Corp., Long Island City, N. Y.
- Wall Colmonoy Corp., Detroit, Mich.

Spray, Paint

- Aeroil Products Co., Inc., South Hackensack, N. J.
- Binks Mfg. Co., Chicago, Ill.
- Black Mfg. Co., Baltimore, Md.
- DeVilbiss Co., Toledo, Ohio.
- Eclipse Air Brush Co., Newark, N. J.
- Electric Sprayit Co., Sheboygan, Wis.
- Electro Dustless Painting, Inc., Elmwood, Conn.
- Plummer Spray Equipment Co., Napoleon, Ohio.
- Portable Electric Tools, Inc., Chicago, Ill.
- Spray Engineering Co., Somerville, Mass.

GUTTER FORMERS

See Machines, Gutter Forming

GUTTER FITTINGS AND ACCESSORIES

See Fittings and Accessories, Gutter

GUTTERS

- Ajax Furnace Fittings Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Alabama Metal Lath Co., Birmingham, Ala. (Steel & copper)
- Allan Corp., Trenton, N. J.
- Barnes Metal Products Co., Chicago, Ill.
- Bayonne Steel Products Co., Newark, N. J.
- Berger Bros. Co., Philadelphia, Pa.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Braden Mfg. Co., Terre Haute, Ind.
- Campbell Stainless Products Co., Washington, Pa. (Stainless steel)
- Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Enderle, Inc., Ltd., Frank X., Los Angeles, Calif. (Galvanized & copper)
- Herbert & Sons, R. D., Nashville, Tenn.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Inland Steel Products Co., Milwaukee, Wis. (Galvanized & copper)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Klauser Mfg. Co., Dubuque, Iowa.
 La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
 (Galvanized steel)
 Lamb & Ritchie Co., Cambridge, Mass. (Galvanized & copper)
 Lyon, Conklin & Co., Inc., Baltimore, Md.
 • Miller & Doing, Brooklyn, N. Y.
 New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
 Newport Steel Corp., Newport, Ky.
 Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
 • Obdyke, Inc., B. P., Philadelphia, Pa.
 Overly Mfg. Co., Greensburg, Pa. (Copper & aluminum)
 Penn Supply & Metal Corp., Philadelphia, Pa. (Galvanized, copper & aluminum)
 Pittsburgh Plate Glass Co., Pittsburgh, Pa.
 Reeves Steel & Mfg. Co., Dover, Ohio. (Galvanized steel)
 Reynolds Metals Co., Louisville, Ky. (Aluminum)
 Riffin Metal Products, Kankakee, Ill.
 Rynker Steel Products Co., Billings, Mont.
 St. Paul Corrugating Co., St. Paul, Minn. (Galvanized steel)
 Schecter Bros. Co., Philadelphia, Pa. (Galvanized & copper)
 Schoedinger, F. O., Columbus, Ohio. (Galvanized, stainless steel & copper)
 Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Galv. & copper)
 Sheet Metal Products Co., Peoria, Ill.
 Sioux Steel Co., Sioux Falls, S. Dak. (Galv. & copper)
 Southridge Roofing Co., Inc., Southbridge, Mass. (Galv. & copper)
 Southern Iron Co., E. E., St. Louis, Mo.
 Southern States Iron Roofing Co., Savannah, Ga. (Galvanized steel & copper)
 Standard Furnace Supply Co., Omaha, Nebr. (Galv.)
 • Thor Metal Products Co., Inc., Syracuse, N. Y. (Galv. & copper)
 Tiffin Art Metal Co., Tiffin, Ohio. (Aluminum, stainless steel, copper & galv.)
 Van Noorden Co., E., Boston, Mass.
 Wheeling Corrugating Co., Wheeling, W. Va. (Galvanized steel)
 Williams-Wallace Co., Metalbestos Div., San Francisco, Calif. (Galvanized & copper)
 York Corrugating Co., York, Pa. (Galvanized & copper)

HAMMERS, POWER

Black & Decker Mfg. Co., Towson, Md. (Electric)
 Borm Mfg. Co., Elgin, Ill. (Pneumatic)
 • Brown-Apppton Co., New York, N. Y. (Pneumatic)
 Chicago Pneumatic Tool Co., New York, N. Y.
 Independent Pneumatic Tool Co., Aurora, Ill. (Electric & pneumatic)
 Keller Tool Co., Grand Haven, Mich. (Pneumatic)
 Millers Falls Co., Greenfield, Mass. (Electric)
 Noble & Stanton, Bedford, Ohio. (Electric)
 Phillips Drill Co., Chicago, Ill. (Electric)
 Powder Power Tool Corp., Portland, Ore. (Powder charged)
 Rotor Tool Co., Cleveland, Ohio. (Pneumatic)
 Skisaw, Inc., Chicago, Ill. (Electric & pneumatic)
 Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
 Superior Pneumatic Div. Herbrand Tools, Cleveland, Ohio. (Pneumatic)
 Syntro Co., Homer City, Pa. (Electric)
 Van Dorn Electric Tool Co., Towson, Md. (Electric)
 Van Products Co., Erie, Pa. (Pneumatic-foot controlled)
 Whiting Corp., Harvey, Ill. (Electric)
 • Wodack Electric Tool Corp., Chicago, Ill. (Electric)

HARDWARE, FOR CABINETS AND CASINGS

(Handles, name plates, etc.)

American Cabinet Hardware Corp., Rockford, Ill. (Pulls, knobs, hinges, catches, etc.)
 American Insulator Corp., New Freedom, Pa.
 Corbin Div., P. & F., American Hardware Corp., New Britain, Conn. (Handles, catches, locks, hinges)
 Etched Products Co., Long Island City, N. Y. (Name Plates)
 Fisher Brass Foundry, Los Angeles, Calif. (Handles)
 Greenberg's Sons, M., San Francisco, Calif. (Name plates, letters, hinges, bolts, latches)
 Moss Industries, Inc., Brooklyn, N. Y.
 • National Lock Co., Inc., Rockford, Ill.
 Premier Metal Etching Co., Long Island City, N. Y. (Name plates)
 Soss Mfg. Co., Detroit, Mich. (Invisible hinges)

HEAT PUMPS

See Air Conditioning Units, Central Plant, Summer-Winter

HEATERS, DIRECT FIRED

See Furnaces

HEATERS, SCHOOL ROOM

Agricola Furnace Co., Inc., Gadsden, Ala.
 Andrews Heating Co., Minneapolis, Minn.
 Campbell Heating Co., Des Moines, Iowa.
 Chicago Steel Furnace Co., Chicago, Ill. (Gas & oil)
 Daniels Mfg. Co., Inc., Sam, Hardwick, Vt. (Wood)
 • Dravo Corp., Pittsburgh, Pa. (Gas & oil)
 Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
 Green Colonial Furnace Co., Des Moines, Iowa. (Coal)
 Hart & Crouse Corp., Oneida, N. Y.
 • Henry Furnace Co., Medina, Ohio.
 • Hess-Snyder Co., Massillon, Ohio.
 Home Furnace Co., Holland, Mich. (Coal)
 Homer Furnace & Foundry Corp., Coldwater, Mich.
 Kehm Corp., Chicago, Ill.
 Keith Furnace Co., Des Moines, Iowa.
 Kelsey Heating Co., Syracuse, N. Y.
 MaGirl Foundry & Furnace Co., Bloomington, Ill. (Coal, oil & gas)
 Marshall Furnace Co., Marshall, Mich. (Coal)
 • May-Fieberger Co., Newark, Ohio.
 • Meyer Furnace Co., Peoria, Ill. (Coal)
 • Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas)
 Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
 • Perfection Stove Co., Cleveland, Ohio. (Oil)
 Pittston Stove Co., Pittston, Pa.
 Portland Stove Foundry Co., Portland, Maine.
 • Premier Furnace Co., Dowagiac, Mich. (Oil, gas & coal)
 St. Clair Foundry Corp., Centralia, Ill.
 Temco, Inc., Nashville, Tenn. (Gas)
 • Wise Furnace Co., Akron, Ohio.
 • XXth Century Heating & Ventilating Co., Akron, Ohio.

HEATERS, SPACE, CABINET TYPE

Acme Electric Heating Co., Boston, Mass. (Electric)
 Adams Bros. Mfg. Co., Inc., Pittsburgh, Pa. (Gas)
 Agricola Furnace Co., Inc., Gadsden, Ala. (Coal)
 Allen Mfg. Co., Inc., Nashville, Tenn. (Oil & gas)
 American Gas Heater Corp., Chicago, Ill. (Gas)
 American Gas Machine Co., Albert Lea, Minn. (Oil)
 American Stove Co., Lorain Div., St. Louis, Mo. (Oil)
 Andrews Heating Co., Minneapolis, Minn. (Coal and Oil)
 Armstrong Products Corp., Huntington, W. Va. (Gas & electric)
 B & C Metal Stamping Co., Atlanta, Ga. (Nat. Mfg., LP)
 Beyer Oil Burner Co., Rosamond, Calif. (Oil)
 • Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (All gases)
 Carey Mfg. Co., Philip, Cincinnati, Ohio. (Electric)
 Chattanooga Implement & Mfg. Co., Chattanooga, Tenn. (gas)
 Clark Mfg. Co., H. J., Duarte, Calif. (Gas)
 Cole Hot Blast Mfg. Co., Chicago, Ill. (Coal, Oil, Gas, Wood)
 • Coleman Co., Inc., Wichita, Kans. (Oil)
 Consolidated Industries, Inc., Lafayette, Ind. (Oil)
 Corroaire Heater Corp., Cleveland, Ohio. (Mfg. & mixed gases)
 Davison, Inc., Frank D., Los Angeles, Calif. (Gas)
 Dearborn Stove Co., Chicago, Ill. (Gas)
 Dearborn Stove Co., Dallas, Texas (Gas)
 Duo-Therm Div., Motor Wheel Corp., Lansing, Mich. (Oil & gas)
 Easyheat Inc., Seattle, Wash. (Oil)
 Electromode Corp., Rochester, N. Y. (Electric)
 Empire Stove Co., Belleville, Ill. (Gas)
 Enterprise Foundry Co., Belleville, Ill. (Coal and Wood)
 Estate Stove Co., Sub. Noma Electric Corp., Hamilton, Ohio. (Gas & oil)
 Evans Products Co., Plymouth, Mich. (Oil & gas)
 Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
 Feathertouch Products, Inc., Los Angeles, Calif. (Gas)
 Florence Stove Co., Gardner, Mass. (Oil & gas)
 General Gas Light Co., Kalamazoo, Mich. (Gas)
 • Hammel Radiator Engineering Co., Los Angeles, Calif. (Gas)
 Harrison Sheet Steel Co., Chicago, Ill.
 Heating Equipment Mfg. Co., San Francisco, Calif. (Oil & gas)
 Hirsh Mfg. Co., Garland, Texas. (Nat., butane & mfg.)
 Houston Blow Pipe & Sheet Metal Works, Houston, Texas. (Gas)
 Independence Stove & Furnace Co., Independence, Mo. (Gas)
 Inland Steel Container Co., Chicago, Ill. (Gas)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- International Oil Burner Co., St. Louis, Mo. (Oil)
- Jackes-Evans Mfg. Co., St. Louis, Mo.
- Kehm Corp., Chicago, Ill. (Gas, Oil and Coal)
- Kilbury Mfg. Co., Inc., Lawndale, Calif. (Gas)
- Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)
- Kresno-Stamm Mfg. Co., Palisades Park, N. J. (Oil)
- Laco Oil Burner Co., Inc., Griswold, Iowa. (Oil)
- Lasko Metal Products, Inc., West Chester, Pa. (Gas)
- Leslie Mfg. Co., Dallas, Texas. (Gas)
- LeWinter Appliance Co., Los Angeles, Calif. (Gas)
- Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
- Loneragan Mfg. Co., Albion, Mich. (Oil & gas)
- Martin Stamping & Stove Co., Huntsville, Ala. (Gas)
- Moore Div., Conlon-Moore Corp., Joliet, Ill. (Coal, Oil, Gas)
- Mulkey Co., J. F., Detroit, Mich. (Trailer)
- National Gas Equipment Co., Inc., Terrell, Texas.
- Northwest Heating, Inc., Portland, Ore. (Electric)
- Oakland Foundry Co., Belleville, Ill.
- Ohio Foundry & Mfg. Co., Steubenville, Ohio. (Gas)
- Ohio Stove Co., Portsmouth, Ohio. (Coal)
- Palmer Mfg. Corp., Phoenix, Ariz. (Gas)
- Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Perfection Stove Co., Cleveland, Ohio. (Oil & gas)
- Pernot Corp., Norwalk, Calif. (Oil)
- Phillips & Buttorff Mfg. Co., Nashville, Tenn. (Gas)
- Pittston Stove Co., Pittston, Pa. (Coal or Wood)
- Premier Stove Co., Belleville, Ill. (Gas)
- Quad Stove Mfg. Co., Columbus, Ohio. (Gas)
- Quincy Stove Mfg. Co., Quincy, Ill. (Oil & coal)
- Reznor Mfg. Co., Mercer, Pa. (Gas)
- Rheem Mfg. Co., New York, N. Y. (Gas)
- Robinson Heaters, Inc., Columbus, Ohio. (Gas)
- Samuel Stamping & Enameling Co., Chattanooga, Tenn. (Gas)
- Schoedinger, F. O., Columbus, Ohio. (Gas & LP gas)
- Silent Sioux Oil Burner Corp., Orange City, Iowa. (Oil & gas)
- Southern Aircraft Co., Garland, Dallas Co., Texas. (Gas)
- Spark Stove Co., Inc., Oakland, Calif. (Oil)
- Sunshine Mantle Co., Chanute, Kans. (Gas)
- Superior Mfg. Co., Pittsburgh, Pa. (Gas)
- Surface Combustion Corp., Toledo, Ohio. (Gas)
- Temco, Inc., Nashville, Tenn.
- Tesco, Inc., Tulsa, Okla. (Gas)
- Therm Oil Burner Co., Seattle, Wash. (Oil)
- Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
- United Machine Works, Inc., Hawthorne, Calif. (Gas)
- U. S. Machine Corp., Lebanon, Ind. (Oil)
- United States Stove Co., South Pittsburg, Tenn. (Gas)
- Vacuum Gas Appliances, Div. Union Fork & Hoe Co., Rome, N. Y. (Gas)
- Victor Oil Burner Mfg. Co., Hartford, Conn.
- Viking Mfg. Corp., Cleveland, Ohio. (Oil)
- Washington Stove Works, Everett, Wash. (Wood)
- Williams Radiator Co., Glendale, Calif. (Gas)

HEATERS, DOMESTIC WATER, STORAGE TYPE

Electric

- Ajax Thermostatic Controls Co., Gates Mills, Ohio.
- Auburn Burner Co., Auburn, Ind.
- American Gas Machine Co., Albert Lea, Minn.
- Bard Mfg. Co., Bryan, Ohio.
- Bastian-Morley Co., Inc., La Porte, Ind.
- Bock Corp., Madison, Wis.
- Cady Co., Sub. General Fittings Co., Providence, R. I.
- Clayton & Lambert Mfg. Co., Louisville, Ky.
- Cleveland Heater Co., Cleveland, Ohio.
- Combustion Engineering Co., Inc., Chattanooga, Tenn.
- Crane Co., Chicago, Ill.
- Cuprometal Mfg. Corp., Corona, N. Y.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- General Electric Co., Bridgeport, Conn.
- Gray & Dudley Co., Nashville, Tenn.
- Hynes & Cox Electric Corp., Albany, N. Y.
- Lawson Mfg. Co., Pittsburgh, Pa.
- McGraw Electric Co., Chicago, Ill.
- Michigan Tank & Furnace Corp., Dearborn, Mich.
- Montag Stove & Furnace Works, Portland, Ore.
- Pacific Coast Heater Corp., San Gabriel, Calif.
- Pennsylvania Range Boiler Co., Philadelphia, Pa.
- Perfection Stove Co., Cleveland, Ohio.
- Red Spot Electric Co., Tacoma, Wash.
- Rheem Mfg. Co., New York, N. Y.
- Smith Corp., A. O., Milwaukee, Wis.
- Sunbeau Heater Co., Los Angeles, Calif.
- Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
- Tru-Mac Mfg. Co., Reading, Mass.
- United States Radiator Corp., Detroit, Mich.
- Viking Mfg. Corp., Cleveland, Ohio.
- Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
- Westinghouse Electric Corp., Pittsburgh, Pa.
- Wood Mfg. Co., Inc., John, Conshohocken, Pa.

Gas Fired

- Ajax Thermostatic Controls Co., Gates Mills, Ohio.
- Aldrich Co., Wyoming, Ill.
- American Gas Machine Co., Albert Lea, Minn.
- American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
- Auburn Burner Co., Auburn, Ind.
- Autogas Co., Chicago, Ill.
- Bastian Mfg. Co., W. B., Los Angeles, Calif.
- Bastian-Morley Co., Inc., LaPorte, Ind.
- Bock Corp., Madison, Wis.
- Brown Steel Tank Co., Minneapolis, Minn.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
- Buckeye Water Heater Co., Cleveland, Ohio.
- Cirklair Products Div. Folsom Co., Inc., Dallas, Texas. (Gas)
- Clayton & Lambert Mfg. Co., Louisville, Ky.
- Cleveland Heater Co., Cleveland, Ohio.
- Coleman Co., Inc., Wichita, Kans. (and LP)
- Combustion Engineering Co., Inc., Chattanooga, Tenn.
- Continental Water Heater Co., Los Angeles, Calif.
- Crane Co., Chicago, Ill.
- Cronk Co., Dallas, Texas.
- Dalco Appliance Co., San Francisco, Calif.
- Dary Co., W. M., Long Beach, Calif.
- Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Delco Appliance Div. General Motors Corp., Rochester, N. Y.
- Diamond Agencies, Pasadena, Calif. (LP)
- Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Evans Products Co., Plymouth, Mich.
- EverHot Heater Co., Detroit, Mich.
- Eveready Supply Co., Dallas, Texas.
- General Water Heater Corp., Burbank, Calif.
- Graham Hamby Co., Los Angeles, Calif.
- Hamler Boiler & Tank Co., Chicago, Ill.
- Handley-Brown Heater Co., Jackson, Mich.
- Harrison Sheet Steel Co., Chicago, Ill.
- Hi-Qua Mfg. Co., Philadelphia, Pa.
- Horn-Sullivan Co., San Francisco, Calif.
- Hotstream Heater Co., Cleveland, Ohio.
- Hoyt Heater Co. of No. Calif., Oakland, Calif.
- Hynes & Cox Electric Corp., Albany, N. Y.
- Lawson Mfg. Co., Pittsburgh, Pa.
- Los Angeles Gas Appliance Co., Inc., Los Angeles, Calif.
- Lovekin Water Heater Co., Philadelphia, Pa.
- McDaniel Mfg. Co., Inc., Dallas, Texas.
- McDonald Mfg. Co., A. Y., Dubuque, Iowa.
- Michigan Tank & Furnace Corp., Dearborn, Mich.
- Midwest Heater Co., Omaha, Neb.
- Miller-Special Gas Heating Co., Chicago, Ill.
- Mustee Heater Co., Cleveland, Ohio.
- National Appliances, Inc., Pittsburgh, Pa. (Nat. Mfg., LP)
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Pacific Coast Heater Corp., San Gabriel, Calif.
- Pennsylvania Range Boiler Co., Philadelphia, Pa.
- Pioneer Water Heater Corp., Los Angeles, Calif.
- Pittsburgh Water Heater Co., Pittsburgh, Pa.
- Republic Heater Corp., Huntington Park, Calif.
- Rheem Mfg. Co., New York, N. Y.
- Ruud Mfg. Co., Pittsburgh, Pa.
- Schoedinger, F. O., Columbus, Ohio.
- Security Mfg. Co., Kansas City, Mo.
- Silver Flame Industries, Inc., Detroit, Mich.
- Smith Corp., A. O., Milwaukee, Wis.
- Southwestern Heater Corp., Hillsboro, Texas.
- Star Heater Co., Dallas, Texas. (Nat. Mfg., LP)
- Sunbeau Heater Co., Los Angeles, Calif. (LP Nat. & Mfg.)
- Sunshine Mantle Co., Chanute, Kans.
- SuperBO Mfg. Co., Los Angeles, Calif.
- Thompson Mfg. Co., A. F., Huntington, W. Va.
- United States Radiator Corp., Detroit, Mich.
- Viking Mfg. Corp., Cleveland, Ohio.
- Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
- Wood Mfg. Co., Inc., John, Conshohocken, Pa.

Oil Fired

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Aldrich Co., Wyoming, Ill.
- Allen Mfg. Co., Inc., Nashville, Tenn.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

American Gas Machine Co., Albert Lea, Minn.
 Auburn Burner Co., Auburn, Ind.
 Bastian-Morley Co., Inc., LaPorte, Ind.
 Bock Corp., Madison, Wis.
 Breeze Corps., Inc., Newark, N. J.
 Burnham Boiler Corp., Irvington-on-the-Hudson, N. Y.
 • Century Engineering Corp., Cedar Rapids, Iowa.
 Clayton & Lambert Mfg. Co., Louisville, Ky.
 • Coleman Co., Inc., Wichita, Kans.
 • Conco Engineering Works, Mendota, Ill.
 Crane Co., Chicago, Ill.
 • Delco Appliance Div., General Motors Corp., Rochester, N. Y.
 DeSoto Oil Burner Corp., York, Pa.
 • Dowagiac Steel Furnace Co., Dowagiac, Mich.
 Dualflame Div. H. & K. Appliance Co., Lima, Ohio.
 Duo-Therm Div., Motor Wheel Corporation, Lansing, Mich.
 • Electri Burner Mfg. Co., Rutherford, N. J.
 Evans Products Co., Plymouth, Mich.
 General Automatic Products Corp., Baltimore, Md.
 Gilcor Products Corp., Dowagiac, Mich.
 Gillen Co., J. L., Dowagiac, Mich.
 Gilmore & Co., Jackson G., Columbus, Ohio.
 Hotstream Heater Co., Cleveland, Ohio.
 Hynes & Cox Electric Corp., Albany, N. Y.
 Johnson Co., S. T., Oakland, Calif. & Philadelphia, Pa.
 Kresko Mfg. Co., Inc., Petaluma, Calif.
 • Kresko-Stamm Co., New York, N. Y.
 Lochinvar Products Div., Dearborn, Mich.
 Michigan Tank & Furnace Corp., Dearborn, Mich.
 • Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
 • Nu-Way Corp., Rock Island, Ill.
 • Perfection Stove Co., Cleveland, Ohio.
 Petroleum Heat & Power Co., Stamford, Conn.
 Preferred Utilities Mfg. Corp., New York, N. Y.
 Ray Oil Burner Co., San Francisco, Calif.
 • Rheem Mfg. Co., New York, N. Y.
 Sall Bros., Rockford, Ill.
 Scott-Newcomb, Inc., St. Louis, Mo.
 Sunbeau Heater Co., Los Angeles, Calif.
 Thermo-Products, Inc., North Judson, Ind.
 Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
 Toledo Heater Co., Toledo, Ohio.
 • Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
 Viking Mfg. Corp., Cleveland, Ohio.
 York Electric & Machine Co., York, Pa.
 York-Shipley, Inc., York, Pa.

Stoker Fired

Catskill Metal Works, Inc., Catskill, N. Y.
 Gehl Bros. Mfg. Co., West Bend, Wis.
 Sall Bros., Rockford, Ill.

HEATING COILS

See Coils, Heating

HOISTS, HAND AND POWER

American Engineering Co., Philadelphia, Pa. (Power)
 American MonoRail Co., Cleveland, Ohio. (Electric)
 Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
 Campbell Equipment Co., Chicago, Ill.
 Chicago Pneumatic Tool Co., New York, N. Y. (Power)
 Chisholm-Moore Hoist Corp., Columbus McKinnon Chain Corp., Tonawanda, N. Y.
 Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio. (Hand & electric)
 Detroit Hoist & Machine Co., Detroit, Mich.
 Electro Lift, Inc., New York, N. Y. (Electric)
 Euclid Crane & Hoist Co., Euclid, Ohio.
 Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa. (Hand & electric)
 Harnischfeger Corp., Milwaukee, Wis. (Electric)
 Harrington Co., Philadelphia, Pa. (Hand & electric)
 Industrial Brownhoist Corp., Bay City, Mich.
 Lisbon Hoist & Crane Co., Lisbon, Ohio. (Electric)
 Loudon Machinery Co., Fairfield, Iowa.
 McCollum Hoist & Mfg. Co., Downers Grove, Ill.
 National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio. (Hand)
 Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
 Reading Chain & Block Corp., Reading, Pa. (Hand & power)
 Robbins & Myers, Inc., Springfield, Ohio. (Hand & power)
 Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.
 Stephens-Adamson Mfg. Co., Aurora, Ill.
 • Union Mfg. Co., New Britain, Conn. (Hand)
 Whiting Corp., Harvey, Ill. (Electric)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Wright Hoist Div., American Chain & Cable Co., York, Pa.
 Yale & Towne Mfg. Co., Philadelphia, Pa.

HOODS, DRAFT, GAS

See Draft Diverters, Gas Heaters

HOSE AND FITTINGS, METAL FLEXIBLE

Aeroquip Corp., Jackson, Mich.
 American Metal Hose Branch, American Brass Co., Waterbury, Conn.
 American Ventilating Hose Co., New York, N. Y. (Non-metallic)
 Chicago Metal Hose Corp., Maywood, Ill.
 Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Everhot Products Co., Chicago, Ill.
 Packless Metal Products Corp., New Rochelle, N. Y.
 Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.
 Seamflex Co., Long Island City, N. Y.
 Titeflex, Inc., Newark, N. J.
 United Metal Hose Co., Inc., Long Island City, N. Y.
 Uniflex Metal Hose Corp., Naugatuck, Conn.
 Wiremold Co., Hartford, Conn.

HOUSINGS, BLOWER AND FAN

• Air Controls, Inc., Cleveland, Ohio.
 • Brundage Co., Kalamazoo, Mich. (Blower)
 Chicago Blower Corp., Chicago, Ill. (Propeller)
 Circulators & Devices Mfg. Corp., Brooklyn, N. Y. (Fan)
 • Clarage Fan Co., Kalamazoo, Mich. (Blower)
 Commercial Shearing & Stamping Co., Youngstown, Ohio. (Blower & fan)
 DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
 Detroit Stamping Co., Detroit, Mich. (Blower)
 Hastings Air Conditioning Co., Inc., Hastings, Nebr. (Blower)
 Jan-Air, Inc., Richmond, Ill. (Blower, cast iron)
 • Lau Blower Co., Dayton, Ohio. (Blower)
 Martin Fan & Blower Co., Chicago, Ill.
 Northern Blower Co., Cleveland, Ohio. (Blower)
 Sandberg Mfg. Co., Portland, Ore. (Blower)
 Trade-Wind Motors, Inc., Los Angeles, Calif.
 U. S. Air Conditioning Corp., Minneapolis, Minn.
 Utica Products, Inc., Utica, N. Y.
 • Viking Air Conditioning Corp., Cleveland, Ohio.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass. (Blower & fan)

HUMIDIFIER FITTINGS

See Fittings, Humidifier, Water Line

HUMIDIFIER VALVES

See Valves, Humidifier, Water Level

HUMIDIFIERS, FURNACE, AUTOMATIC

Evaporative

Agricola Furnace Co., Inc., Gadsden, Ala.
 Air Cooling Engineering Co., Morton Grove, Ill.
 • American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 • Automatic Humidifier Co., Cedar Falls, Iowa.
 Bard Mfg. Co., Bryan, Ohio.
 • Char-Gale Mfg. Co., Minneapolis, Minn.
 • Cleveland Humidifier Co., Cleveland, Ohio.
 Green Colonial Furnace Co., Des Moines, Iowa.
 Lennox Furnace Co., Marshalltown, Iowa.
 McDonnell & Miller, Inc., Chicago, Ill.
 • Maid-O'-Mist, Inc., Chicago, Ill.
 • Meyer Furnace Co., Peoria, Ill.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 • Olsen Mfg. Co., C. A., Elyria, Ohio.
 Palmer Mfg. Corp., Phoenix, Ariz.
 Pennsylvania Furnace & Iron Co., Warren, Pa.
 Pfening Co., Fred D., Columbus, Ohio.
 • Premier Furnace Co., Dowagiac, Mich.
 Scoville Mfg. Co., Waterville, Conn.
 Skilbeck Mfg. Co., Kenosha, Wis.
 • Skuttell Mfg. Co., Detroit, Mich.
 Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
 • Viking Air Conditioning Corp., Cleveland, Ohio.
 Western Blower Co., Seattle, Wash.

Spray

• Air Controls, Inc., Cleveland, Ohio.
 Air Cooling Engineering Co., Morton Grove, Ill.
 American Foundry & Furnace Co., Bloomington, Ill.
 Daffin Mfg. Co., Lancaster, Pa.
 Electric Spray Co., Sheboygan, Wis.
 Handelan Washed Air Co., Minneapolis, Minn.

- Little Giant Vaporizer Co., Oklahoma City, Okla.
- Maid-O'-Mist, Inc., Chicago, Ill.
- Meyer Furnace Co., Peoria, Ill.
- Somers, Inc., H. J., Detroit, Mich. (Humidifying system)
- Spray Engineering Co., Somerville, Mass.
- Spraying Systems Co., Chicago, Ill.
- Supreme Electric Products Corp., Rochester, N. Y.
- Water Cooling Corp., New York, N. Y.

HUMIDISTATS

See Controls

HUMIDITY RECORDERS

See Recorders, Humidity

HYGROMETERS

- American Instrument Co., Inc., Silver Spring, Md.
- Bristol Co., Waterbury, Conn.
- Brown Instrument Co., Div. of Minneapolis-Honeywell Regulator Co., Philadelphia, Pa.
- Fee and Sternwedel, Inc., Chicago, Ill.
- Foxboro Co., Foxboro, Mass.
- Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
- G. M. Mfg. Co., New York, N. Y.
- General Scientific Equipment Co., Philadelphia, Pa.
- H-B Instrument Co., Philadelphia, Pa.
- Johnson Service Co., Milwaukee, Wis.
- Moeller Instrument Co., Richmond Hill, N. Y.
- Palmer Thermometers, Inc., Cincinnati, Ohio.
- Philadelphia Thermometer Co., Philadelphia, Pa.
- Precision Thermometer & Instrument Co., Philadelphia, Pa.
- Tagliabue Instruments Div., Weston Electrical Instrument Corp., Newark, N. J.
- Taylor Instrument Cos., Rochester, N. Y.
- Weksler Thermometer Corp., New York, N. Y.
- Weston Electrical Instrument Corp., Newark, N. J.

INCINERATORS

- Autogas Co., Chicago, Ill.
- Bowser, Inc., Cairo, Ill. (Gas fired)
- Calcinator Div., Valley Welding & Boiler Co., Bay City, Mich.
- Majestic Co., Huntington, Ind.

INDICATING THERMOMETERS

See Thermometers, Indicating

INSULATING CEMENT

See Cement, Insulating

INSULATION

Building

- Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Rock wool)
- Alfoll Div., Reflectal Corp., New York, N. Y. (Blanket)
- Alton Mineral Wool Insulation Co., St. Louis, Mo. (Loose, granulated & batts)
- American Flange & Mfg. Co., Inc., New York, N. Y. (Reflective)
- American Hair & Felt Co., Chicago, Ill. (Hair)
- Armstrong Cork Co., Lancaster, Pa.
- Bache & Co., Semon, New York, N. Y. (Glass)
- Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
- Barnhardt Mfg. Co., Charlotte, N. C.
- Barrett Div., Allied Chemical & Dye Corp., New York, N. Y. (Rock wool)
- Berger Furnace Mfg. Co., Pittsburgh, Pa. (Rock wool)
- Cabot, Inc., Samuel, Boston, Mass.
- Carey Co., Philip, Cincinnati, Ohio. (Mineral wool)
- Celotex Corp., Chicago, Ill.
- Certain-teed Products Corp., Ardmore, Pa. (Fiberglass)
- Chamberlin Co. of America, Detroit, Mich. (Rock wool)
- Coast Insulating Products, Los Angeles, Calif. (Batts)
- Cork Import Corp., Englewood, N. J. (Cork)
- Cork Insulation Co., New York, N. Y. (Cork)
- Dry-Zero Corp., Chicago, Ill. (Blanket and Bound Batt)
- Eagle-Picher Co., Cincinnati, Ohio. (Mineral Wool)
- Fliantkote Co., New York, N. Y. (Fibre board & insulating wool)
- Infra Insulation, Inc., New York, N. Y. (Accordion aluminum)
- Insulite Div., Minnesota & Ontario Paper Co., Minneapolis, Minn. (Wood fibre)
- International Vermiculite Co., Girard, Ill. (Expanded mica)
- Johns-Manville, New York, N. Y.
- Johnston Foil Mfg. Co., St. Louis, Mo. (Paper backed foil)
- Keasbey Co., Robert A., New York, N. Y. (Asbestos)

- Kimberly-Clark Corp., Neenah, Wis.
- Lehon Co., Chicago, Ill. (Paper)
- Masonite Corp., Chicago, Ill. (Blankets)
- Mundet Cork Corp., North Bergen, N. J. (Cork)
- Munn & Steel, Inc., Newark, N. J. (Vermiculite)
- National Gypsum Co., Buffalo, N. Y. (Rock Wool)
- Owens-Corning Fiberglas Corp., Toledo, Ohio. (Board & blanket)
- Pacific Lumber Co., San Francisco, Calif.
- Pittsburgh Corning Corp., Pittsburgh, Pa. (Foam glass)
- Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Cellular glass)
- Plant Rubber & Asbestos Works, Inc., San Francisco, Calif.
- Plastergon Wall Board Co., Buffalo, N. Y.
- Reynolds Metals Co., Louisville, Ky.
- Riverton Lime & Stone Co., Inc., Riverton, Va. (Mineral wool)
- Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
- Silvercote Products, Inc., Chicago, Ill. (Reflective type)
- Sisalkraft Co., Chicago, Ill. (Reflective)
- Sprayo-Flake Co., Chicago, Ill. (Mineral fiber & adhesive)
- Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
- Standard Rolling Mills, Inc., Brooklyn, N. Y. (Reflective)
- Tennessee Products & Chemical Corp., Nashville, Tenn. (Mineral wool)
- Therminsul Corp. of America, Kalamazoo, Mich. (Batts, bulk, granulated)
- United Cork Cos., Kearney, N. J.
- United States Gypsum Co., Chicago, Ill. (Mineral wool)
- United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral wool)
- U. S. Rock Wool Co., Salt Lake City, Utah. (Granulated, batt and blanket)
- Western Mineral Products Co., Minneapolis, Minn.
- Western Rock Wool Corp., Huntington, Ind. (Fill)
- Wilson & Co., Inc., Chicago, Ill. (Hair, Felt)
- Wilson, Inc., Grant, Chicago, Ill. (Rock Wool)
- Wood Conversion Co., St. Paul, Minn.
- Zonolite Co., Chicago, Ill.

Dust

- Acme Asbestos Covering & Flooring Co., Chicago, Ill.
- Alfoll Div., Reflectal Corp., New York, N. Y. (Aluminum foil)
- American Hair & Felt Co., Chicago, Ill. (Hair felt)
- Armstrong Cork Co., Lancaster, Pa.
- Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
- Cabot, Inc., Samuel, Boston, Mass.
- Carey Mfg. Co., Philip, Cincinnati, Ohio.
- Celotex Corp., Chicago, Ill.
- Coast Insulating Products, Los Angeles, Calif. (rolls)
- Cork Import Corp., Englewood, N. J. (Cork)
- Cork Insulation Co., Inc., New York, N. Y. (Cork)
- Dry-Zero Corp., Chicago, Ill.
- Eagle-Picher Co., Cincinnati, Ohio.
- Ehret Magnesia Mfg. Co., Valley Forge, Pa.
- Felters Co., Inc., Boston, Mass. (Felt)
- Gustin-Bacon Mfg. Co., Kansas City, Mo. (Fiberglass)
- Hindle & Douch Paper Co., Sandusky, Ohio.
- Insulite Div., Minnesota & Ontario Paper Co., Minneapolis, Minn. (Wood fibre)
- International Vermiculite Co., Girard, Ill.
- Johns-Manville, New York, N. Y.
- Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
- Keasbey Co., Robert A., New York, N. Y. (Aircell cork & asbestos)
- Keystone Asphalt Products Co., Chicago, Ill.
- LaCleda-Christy Clay Products Co., St. Louis, Mo.
- Masonite Corp., Chicago, Ill.
- Mortell Co., J. W., Kankakee, Ill. (Cork coating)
- Mundet Cork Corp., North Bergen, N. J. (Cork)
- Munn and Steele, Inc., Newark, N. J. (Plastic)
- National Gypsum Co., Buffalo, N. Y. (Rock Wool)
- Norristown Magnesia & Asbestos Co., Norristown, Pa.
- Owens-Corning Fiberglas Corp., Toledo, Ohio. (Board and blanket)
- Pabco Products Inc., San Francisco, Calif. (Magnesia)
- Pittsburgh Corning Corp., Pittsburgh, Pa. (Foam glass)
- Pittsburgh Plate Glass Co., Chicago, Ill. (Cellular Glass)
- Plant Rubber & Asbestos Works, Inc., San Francisco, Calif.
- Ougley Co., Inc., New York, N. Y.
- Refractory & Insulation Corp., New York, N. Y. (Inside duct lining)
- Reynolds Metals Co., Louisville, Ky. (Aluminum foil)
- Robinson Insulation Co., Great Falls, Mont.
- Ruberoid Co., New York, N. Y. (Asbestos)
- Sall Mountain Co., Chicago, Ill.
- Spravo-Flake Co., Chicago, Ill. (Mineral fiber & adhesive)
- Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
- Therminsul Corp., Kalamazoo, Mich. (Block rock wool)
- United Cork Cos., Kearney, N. J.
- United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral wool)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

eral Wool)

- United States Rubber Co., New York, N. Y. (Sound deadening)
- Western Felt Works, Chicago, Ill. (Felt)
- Wilson & Co., Inc., Chicago, Ill. (Hair & felt)
- Wilson, Inc., Grant, Chicago, Ill.
- Wood Conversion Co., St. Paul, Minn.

Furnace

- Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos, rockwool)
- Alfol Div. Reflectal Corp., New York, N. Y. (Aluminum foil & asbestos combination)
- Babcock & Wilcox Co., New York, N. Y. (Firebrick, cement mixes)
- Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
- Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos & magnesia)
- Chicago Fire Brick Co., Chicago, Ill. (Mineral wool & plastic cement)
- Coast Insulating Products, Los Angeles, Calif. (Plastic cement)
- Eagle-Picher Co., Cincinnati, Ohio.
- Ehret Magnesia Mfg. Co., Valley Forge, Pa.
- Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
- Gustin-Bacon Mfg. Co., Kansas City, Mo. (Fiberglass faced with aluminum foil)
- International Vermiculite Co., Girard, Ill.
- Johns-Manville, New York, N. Y.
- Keasby & Mattison Co., Ambler, Pa. (Asbestos)
- Keasby Co., Robert A., New York, N. Y. (Asbestos cement, magnesium blocks)
- LaCade-Christy Clay Products Co., St. Louis, Mo. (Cement & blocks)
- Munn and Steele, Inc., Newark, N. J. (Bonding, castable)
- Norristown, Magnesia & Asbestos Co., Norristown, Pa.
- Owens-Corning Fiberglass Corp., Toledo, Ohio. (Blanket)
- Pabco Products Inc., San Francisco, Calif.
- Plant Rubber & Asbestos Works, Inc., San Francisco, Calif. (Asbestos)
- Pibroic Jointless Firebrick Co., Chicago, Ill. (Mineral Wool)
- Quigley Co., Inc., New York, N. Y.
- Refractory & Insulation Corp., New York, N. Y. (Block, blanket)
- Robinson Insulation Co., Great Falls, Mont. (High temperature cement)
- Ruberoid Co., New York, N. Y. (Asbestos)
- Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
- Thermisul Corp., Kalamazoo, Mich. (Block rock wool)
- United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral wool)
- U. S. Rock Wool Co., Salt Lake City, Utah. (Rock wool cement)
- Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
- Wilson, Inc., Grant, Chicago, Ill. (Asbestos)

KITCHEN FANS

See Fans, Kitchen

LAMPS, GERMICIDAL

- Domestic Devices, Cleveland, Ohio.
- General Electric Co., Cleveland, Ohio.
- Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
- Sperti, Inc., Norwood, Ohio.
- Westinghouse Electric Corp., Bloomfield, N. J.

LIFTS, SKYLIGHT

- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Biersach & Niedermeyer Co., Milwaukee, Wis.
- Danzon Metal Works Co., Hagerstown, Md.
- Levov, David, New York, N. Y. (Gearing)
- Park City Cornice Works, Inc., Bridgeport, Conn.
- Perkinson & Brown, Chicago, Ill.
- Van Noorden Co., E., Boston, Mass.
- Weiss & Co., H., New York, N. Y.

LIMIT CONTROLS

See Controls

LININGS, CHIMNEY

- Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel)
- Wallace Co., William, Metalbestos Div., Belmont, Calif.

LINKS, FUSIBLE

- Grinnell Co., Inc., Providence, R. I.
- Richards-Wilcox Mfg. Co., Aurora, Ill.
- Steffens-Amberg Co., Newark, N. J.
- Westinghouse Electric Corp., Pittsburgh, Pa.

LOUVERS AND SHUTTERS, AUTOMATICALLY OR MANUALLY CONTROLLED

- Air Controls, Inc., Cleveland, Ohio.
- Air Conditioning Products Co., Detroit, Mich.
- Airecon Industries, Detroit, Mich.
- Airmaster Corp., Chicago, Ill.
- Air & Refrigeration Corp., New York, N. Y.
- Allen Ventilator Div. Production Planning Co., Rochester, Mich.
- American Coolair Corp., Jacksonville, Fla.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Warming & Ventilating Co., Toledo, Ohio.
- Arex Co., Chicago, Ill.
- Arlington Electric Co., St. Louis, Mo.
- Babbitt, Inc., New York, N. Y.
- Barber-Colman Co., Rockford, Ill.
- Belter Electric Mfg. Co., G. J., St. Louis, Mo.
- Berns Mfg. Co., Chicago, Ill.
- Biersach & Niedermeyer Co., Milwaukee, Wis.
- Bishop & Babcock Mfg. Co., Cleveland, Ohio.
- Buffalo Forge Co., Buffalo, N. Y.
- Burt Mfg. Co., Akron, Ohio.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Champion Blower & Forge Co., Lancaster, Pa.
- Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Clay Equipment Corp., Cedar Falls, Iowa.
- Commercialaire, Inc., Brooklyn, N. Y.
- Controlair Mfg. Co., Los Angeles, Calif.
- Dana Fan & Blower Corp., Cincinnati, Ohio.
- DeBothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.
- Decatur Iron & Steel Co., Decatur, Ala.
- Dual-Air Fan Corp., South Elgin, Ill.
- Eagle-Picher Co., Cincinnati, Ohio.
- Electrovent Fan & Mfg. Co., Chicago, Ill.
- Elgo Shutter & Mfg. Co., Detroit, Mich.
- Hunter Fan & Ventilating Co., Memphis, Tenn.
- International Engineering, Inc., Dayton, Ohio.
- Johnson Fan & Blower Corp., Chicago, Ill.
- Jordan & Co., Inc., Paul R., Indianapolis, Ind.
- Kirk & Blum Mfg. Co., Cincinnati, Ohio.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Lakewood Engineering & Mfg. Co., Chicago, Ill.
- Martin Fan & Blower Co., Chicago, Ill.
- Maysteel Products, Inc., Milwaukee, Wis.
- Meier Electric & Machine Co., Inc., Indianapolis, Ind.
- Meyer Mfg. Co., Detroit, Mich.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Myers Electric Co., Inc., Pittsburgh, Pa.
- Nelson, Herman, Div. American Air Filter Co., Moline, Ill.
- Overly Mfg. Co., Greensburg, Pa.
- Peerless Electric Co., Warren, Ohio.
- Perkinson & Brown, Chicago, Ill.
- Reed Unit-Fans, Inc., New Orleans, La.
- Riggin Metal Products, Kankakee, Ill.
- Robertson Co., H. H., Pittsburgh, Pa.
- Schoedinger, F. O., Columbus, Ohio.
- Schwitzer-Cummins Co., Indianapolis, Ind.
- Signal Electric Mfg. Co., Menominee, Mich.
- Simpson Screen Co., Oakland, Calif.
- Standard Stamping & Perforating Co., Chicago, Ill.
- Swartwout Co., Cleveland, Ohio.
- Titus Mfg. Corp., Waterloo, Iowa.
- Trade-Wind Motors, Inc., Los Angeles, Calif.
- Tuttle & Bailey, Inc., New Britain, Conn.
- United States Register Co., Battle Creek, Mich.
- Uno Ventilator Co., Saugus, Mass.
- Utility Appliance Corp., Los Angeles, Calif.
- Van Noorden Co., E., Boston, Mass.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- White & Sons, Inc., Wilford O., Boston, Mass.
- Wing Mfg. Co., L. J., New York, N. Y.
- Young Regulator Co., Cleveland, Ohio.

LOUVERS, STATIONARY

- Air Control Products, Inc., Coopersville, Mich.
- Airecon Industries, Detroit, Mich.
- American Warming & Ventilating Co., Toledo, Ohio.
- Appleton Supply Co., Inc., Appleton, Wis. (End Wall)
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Burt Mfg. Co., Akron, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
- Commercialaire, Inc., Brooklyn, N. Y.
- Elgo Shutter & Mfg. Co., Detroit, Mich.
- Firecraft Corp., Chicago, Ill.
- Hemphill Co., A. D., Lake City, Minn.
- Inland Steel Products Co., Milwaukee, Wis.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Leslie Welding Co., Chicago, Ill.
- Meyer Mfg. Co., Detroit, Mich.
- Molloy Machine Corp., Chicago, Ill.
- Muckle Mfg. Co., Owatonna, Minn.
- Perkinson & Brown, Chicago, Ill.
- Schwitzer-Cummins Co., Indianapolis, Ind.
- Simpson Screen Co., Oakland, Calif.
- Swartwout Co., Cleveland, Ohio.
- Titus Mfg. Corp., Waterloo, Iowa.
- United States Register Co., Battle Creek, Mich.
- Uno Ventilator Co., Saugus, Mass.

MACHINERY, SHEET METAL, REBUILT AND USED

(Capacity 10 ga or lighter)

- Acme Equipment Co., Inc., Chicago, Ill.
- Biggs Supply Co., B. C., Lincoln, Nebr.
- Brooks Co., Inc., B. D., Boston, Mass.
- Burns Machinery Co., F. W., Milwaukee, Wis.
- Central-West Machinery Co., Chicago, Ill.
- Federal Machinery Co., New York, N. Y. (Sheet Metal)
- Harris Machinery Co., Minneapolis, Minn.
- Hyman & Sons, Joseph, Philadelphia, Pa.
- Interstate Machinery Co., Inc., Chicago, Ill.
- Machine Rebuilding Co., Detroit, Mich.
- Machinery Liquidating Co., Detroit, Mich.
- Maplewood Machinery Co., Chicago, Ill.
- Milton Equipment Co., Philadelphia, Pa.
- Potts-Farrington Co., Philadelphia, Pa.
- Reiner & Campbell Co., Inc., Newark, N. J.
- St. Louis Tool Co., St. Louis, Mo.

MACHINES, SHEET METAL WORKING

(Capacity 10 ga or lighter)

Bar Folding, Hand

- Barth Mfg. Co., Milldale, Conn.
- Frederick Iron & Steel, Inc., Frederick, Md.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- St. Louis Tool Co., St. Louis, Mo.

Bending, Hand

- Barth Mfg. Co., Milldale, Conn.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Packham Crimper Co., Mechanicsburg, Ohio.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Robertson, F. L., Buffalo, N. Y.

Bending, Power

- Callahan Can Machine Co., Inc., Brooklyn, N. Y.
- Kling Bros. Engineering Works, Chicago, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Swain Mfg. Co., Fred J., St. Louis, Mo.

Benders (Angle, Etc.)

- Bath Company, Cyril, Cleveland, Ohio. (Contour formers)
- Champion Blower & Forge Co., Lancaster, Pa.
- Excelsior Tool & Machine Co., East St. Louis, Ill. (Circular bending)
- Hendley & Whittemore Co., Beloit, Wis.
- Hosfeld Mfg. Co., Winona, Minn.
- Kane & Rosch, Inc., Syracuse, N. Y.
- Kling Bros. Engineering Works, Chicago, Ill.
- Knights Co., James, Sandwich, Ill.
- Martens & Stormoen, Boston, Mass.
- Merchandising & Manufacturing Associates, Inc., Lancaster, Pa. (Shrinkers & stretchers)
- O'Neil-Irwin Mfg. Co., Lake City, Minn.
- Pedrick Tool & Machine Co., Philadelphia, Pa.
- Thomas Machine Mfg. Co., Pittsburgh, Pa.
- Whitney Metal Tool Co., Rockford, Ill.

Brakes, Hand

- Acme Equipment Co., Inc., Chicago, Ill.
- Barth Mfg. Co., Milldale, Conn.
- Berkroy Products, Inc., Burbank, Calif.
- Dreis & Krump Mfg. Co., Chicago, Ill.
- Excelsior Tool & Machine Co., East St. Louis, Ill.
- G. & S. Machine Shop, Detroit, Mich.

- Niagara Machine & Tool Works, Buffalo, N. Y.
- O'Neil-Irwin Mfg. Co., Lake City, Minn.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Ward Machine & Tool Co., Pittsburgh, Pa.
- Ward Machinery Co., Chicago, Ill.
- Webb Machine & Tool Co., Imperial, Pa.
- Weiss & Co., H., New York, N. Y.
- Whitney Metal Tool Co., Rockford, Ill.
- Wysong & Miles Co., Greensboro, N. C.

Brakes, Portable

- Berkroy Products, Inc., Burbank, Calif.
- Dreis & Krump Mfg. Co., Chicago, Ill.
- G. & S. Machine Shop, Detroit, Mich.
- Harris, A. R., Hammond, Ind.
- O'Neil-Irwin Mfg. Co., Lake City, Minn.
- Vyke Brake Co., Omaha, Nebr.
- Ward Machine & Tool Co., Pittsburgh, Pa.
- Webb Machine & Tool Co., Imperial, Pa.
- Weiss & Co., H., New York, N. Y.
- Whitney Metal Tool Co., Rockford, Ill.

Brakes, Power

- Bath Co., Cyril, Cleveland, Ohio.
- Cincinnati Shaper Co., Cincinnati, Ohio.
- Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.
- Dreis Co., Ltd., Edward J., San Carlos, Calif. (Air)
- Dreis & Krump Mfg. Co., Chicago, Ill.
- Heartley Machine & Tool Co., Toledo, Ohio.
- Munton Mfg. Co., Franklin Park, Ill.
- Verson Allsteel Press Co., Chicago, Ill.
- Weiss & Co., H., New York, N. Y.
- Whitney Metal Tool Co., Rockford, Ill.

Brakes, Press (and Dies)

- Bath Co., Cyril, Cleveland, Ohio.
- Dreis & Krump Mfg. Co., Chicago, Ill.
- Federal Machine & Welder Co., Warren, Ohio.
- Pacific Industrial Mfg. Co., Oakland, Calif.

Burring, Hand

- Barth Mfg. Co., Milldale, Conn.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

Burring, Power

- Independent Pneumatic Tool Co., Aurora, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

Clear Bending, Hand

- Niagara Machine & Tool Works, Buffalo, N. Y.
- Riverside Machinery Co., Minneapolis, Minn.
- Smith, R. E., Waukegan, Ill.

Combination, Hand

(Bending, Burring, Turning, Wiring, etc.)

- Barth Mfg. Co., Milldale, Conn.
- Frederick Iron & Steel, Inc., Frederick, Md.
- Ingram Machinery Co., Picher, Okla.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Packham Crimper Co., Mechanicsburg, Ohio.
- Peck, Stow & Wilcox Co., Southington, Conn.

Combination, Power

(Bending, Burring, Turning, Wiring, etc.)

- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Wysong & Miles Co., Greensboro, N. C.

Crimping, Hand

- Barth Mfg. Co., Milldale, Conn.
- Ingram Machinery Co., Picher, Okla.
- Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Packham Crimper Co., Mechanicsburg, Ohio.
- Peck, Stow & Wilcox Co., Southington, Conn.

Crimping, Power

- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Streine Tool & Mfg. Co., New Bremen, Ohio.

Dimpling, Electric

York Electric Tool Co., York, Pa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Double Seaming, Roof, Power

- Flagler Mfg. Co., Roy G., Detroit, Mich.
- Lockformer Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Streine Tool & Mfg. Co., New Bremen, Ohio.

Elbow, Hand

- Barth Mfg. Co., Milldale, Conn.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

Elbow, Power

- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

Filing

- Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic)
- DoALL Co., Des Plaines, Ill.

Flanging, Hand

- Barth Mfg. Co., Milldale, Conn.
- Excelsior Tool & Machine Co., East St. Louis, Ill.
- Lockformer Co., Chicago, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- "Original" Metal Flanging Machine Works, Seattle, Wash.
- Packham Crimper Co., Mechanicsburg, Ohio.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Ward Machinery Co., Chicago, Ill.
- Weiss & Co., H., New York, N. Y.

Flanging, Power

- Callahan Can Machine Co., Inc., Brooklyn, N. Y.
- Cleveland Punch & Shear Works Co., Cleveland, Ohio.
- Flagler Mfg. Co., Roy G., Detroit, Mich.
- Kling Bros. Engineering Works, Chicago, Ill.
- Lockformer Co., Chicago, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Pacific Industrial Mfg. Co., Oakland, Calif.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Swain Mfg. Co., Fred J., St. Louis, Mo.
- Ward Machinery Co., Chicago, Ill.
- Whitney Corp., Harvey, Ill.

Grooving, Hand

- Barth Mfg. Co., Milldale, Conn.
- Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Whitney Metal Tool Co., Rockford, Ill.

Grooving, Power

- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

Gutter Forming, Hand

- Kane & Roach, Inc., Syracuse, N. Y. (Power)
- Robertson, F. L., Buffalo, N. Y.
- Streine Tool & Mfg. Co., New Bremen, Ohio.

Lock Forming, Power

- Flagler Mfg. Co., Roy G., Detroit, Mich.
- Kane & Roach, Inc., Syracuse, N. Y.
- Lockformer Co., Chicago, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Streine Tool & Mfg. Co., New Bremen, Ohio.

Nibbling, Hand

- Beverly Shear Mfg. Co., Chicago, Ill.
- National Machine Tool Co., Racine, Wis.

Nibbling, Power

- Berkroy Products, Inc., Burbank, Calif.
- Campbell Machine Div. American Chain & Cable Co., Inc., Bridgeport, Conn.
- H-A Mfg. Co., York, Pa.
- Independent Pneumatic Tool Co., Aurora, Ill. (Portable)
- Libert Machine Co., Green Bay, Wis.
- St. Louis Tool Co., St. Louis, Mo.
- Savage Co., W. J., Knoxville, Tenn.
- Wales-Strippit Corp., North Tonawanda, N. Y.

Noching, Hand

- Fallsington Mfg. Co., Fallsington, Pa. (Also power)
- O'Neil-Irwin Mfg. Co., Lake City, Minn.
- Whitney Metal Tool Co., Rockford, Ill.

Pittsburgh Lock Forming

- Flagler Mfg. Co., Roy G., Detroit, Mich.
- Lockformer Co., Chicago, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Riverside Machinery Co., Minneapolis, Minn.

Pittsburgh Lock Opening

- Bristol Metal Working Equipment, Hartford, Conn.
- Maplewood Machinery Co., Chicago, Ill.

Presses, Blanking

- Cleveland Punch & Shear Works Co., Cleveland, Ohio.
- Fallsington Mfg. Co., Fallsington, Pa.
- Famco Machine Co., Racine, Wis.
- Federal Machine & Welder Co., Warren, Ohio.
- Henry & Wright Div. Hartford-Empire Co., Hartford, Conn.
- Highland Engineering Co., Santa Monica, Calif.
- Minster Machine Co., Minster, Ohio.
- New Albany Machine Mfg. Co., New Albany, Ind.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Pacific Industrial Mfg. Co., Oakland, Calif.
- Zeh & Hahnemann Co., Newark, N. J.

Presses, Forming

- Cleveland Punch & Shear Works Co., Cleveland, Ohio.
- Dreis & Krump Mfg. Co., Chicago, Ill.
- Fallsington Mfg. Co., Fallsington, Pa.
- Famco Machine Co., Racine, Wis.
- Federal Machine & Welder Co., Warren, Ohio.
- Highland Engineering Co., Santa Monica, Calif.
- Keckley Co., O. C., Chicago, Ill.
- Minster Machine Co., Minster, Ohio.
- New Albany Machine Mfg. Co., New Albany, Ind.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Pacific Industrial Mfg. Co., Oakland, Calif.
- Zeh & Hahnemann Co., Newark, N. J.

Presses, Punching

- Cleveland Punch & Shear Works Co., Cleveland, Ohio.
- Fallsington Mfg. Co., Fallsington, Pa.
- Famco Machine Co., Racine, Wis.
- Federal Machine & Welder Co., Warren, Ohio.
- Henry & Wright Div. Hartford-Empire Co., Hartford, Conn.
- Highland Engineering Co., Santa Monica, Calif.
- Marshalltown Mfg. Co., Marshalltown, Iowa.
- Minster Machine Co., Minster, Ohio.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Pacific Industrial Mfg. Co., Oakland, Calif.
- Wales-Strippit Corp., North Tonawanda, N. Y.
- Wiedemann Machine Co., Philadelphia, Pa.
- Zeh & Hahnemann Co., Newark, N. J.

Punches, Power

- Beatty Machine & Mfg. Co., Hammond, Ind.
- Bliss Co., E. W., Canton, Ohio.
- Buffalo Forge Co., Buffalo, N. Y.
- Callahan Can Machine Co., Inc., Brooklyn, N. Y.
- Cleveland Punch & Shear Works Co., Cleveland, Ohio.
- Doelger & Kirsten, Inc., Milwaukee, Wis.
- Excelsior Tool & Machine Co., East St. Louis, Ill.
- Fallsington Mfg. Co., Fallsington, Pa.
- Famco Machine Co., Racine, Wis.
- Hendley & Whittemore Co., Beloit, Wis.
- Henry & Wright Div. Hartford-Empire Co., Hartford, Conn.
- Highland Engineering Co., Santa Monica, Calif.
- Kling Bros. Engineering Works, Chicago, Ill.
- Maxant Button & Supply Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Progressive Welder Sales Co., Detroit, Mich.
- Swaine Mfg. Co., Fred J., St. Louis, Mo.
- Thomas Machine Mfg. Co., Pittsburgh, Pa.
- Verson Allsteel Press Co., Chicago, Ill.
- Wales-Strippit Corp., North Tonawanda, N. Y.
- Weiss & Co., H., New York, N. Y.
- Whitney Metal Tool Co., Rockford, Ill.
- Wiedemann Machine Co., Philadelphia, Pa.

Roll Forming, Power**(For Mouldings and Shapes)**

- Dahlstrom Machine Works, Chicago, Ill.
- Flagler Mfg. Co., Roy G., Detroit, Mich.
- Kane & Roach, Inc., Syracuse, N. Y.
- Lockformer Co., Chicago, Ill.
- Maplewood Machinery Co., Chicago, Ill.
- Yoder Co., Cleveland, Ohio.

Saws, Band, Sheet Metal Cutting

- Acme Saw Works & Supply Co., Los Angeles, Calif.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Barnes Co., Inc., W. O., Detroit, Mich.
 Disston & Sons, Inc., Henry, Philadelphia, Pa.
 DoAll Co., Des Plaines, Ill.
 Grob Bros., Grafton, Wis.
 Millers Falls Co., Greenfield, Mass.
 Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
 Tannetitz Works, Grand Rapids, Mich.
 Thompson & Son Co., Henry G., New Haven, Conn.

Saws, Hack, Power

Acme Saw Works & Supply Co., Los Angeles, Calif.
 Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic)
 Barnes Co., Inc., W. O., Detroit, Mich.
 Champion Blower & Forge Co., Lancaster, Pa.
 Chicago Precision Machine Co., Chicago, Ill.
 Disston & Sons, Inc., Henry, Philadelphia, Pa.
 • Mid-States Welder Mfg. Co., Chicago, Ill. (Portable)
 Racine Tool & Machine Co., Racine, Wis.
 • RCS Tool Sales Corp., Joliet, Ill. (Portable)
 Robertson, F. L., Buffalo, N. Y.
 Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
 Skilaw, Inc., Chicago, Ill.
 Wells Mfg. Corp., Three Rivers, Mich.

Seaming, Hand

• Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Weiss & Co., H., New York, N. Y.
 • Whitney Metal Tool Co., Rockford, Ill.

Seaming, Power

Bliss Co., E. W., Detroit, Mich.
 Callahan Can Machine Co., Inc., Brooklyn, N. Y.
 • Lockformer Co., Chicago, Ill.
 • Maplewood Machinery Co., Chicago, Ill.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Streine Tool & Mfg. Co., New Bremen, Ohio.
 Swain Mfg. Co., Fred J., St. Louis, Mo.

Setting Down, Hand

• Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.

Setting Down, Power

Callahan Can Machine Co., Inc., Brooklyn, N. Y.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Hand

• Barth Mfg. Co., Milldale, Conn.
 Berkroy Products, Inc., Burbank, Calif.
 Klenk's Aviation Snips, Wilmington, Del.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Power

Bliss Co., E. W., Canton, Ohio.
 H-A Mfg. Co., York, Pa.
 Kling Bros. Engineering Works, Chicago, Ill.
 Libert Machine Co., Green Bay, Wis.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Whiting Corp., Harvey, Ill.

Shears, Electric, Portable

Black & Decker Mfg. Co., Towson, Md.
 Merchandising & Manufacturing Associates, Inc., Lancaster, Pa.
 (Electric or pneumatic drill attachment)
 O'Neil-Irwin Mfg. Co., Lake City, Minn.
 Skilaw, Inc., Chicago, Ill.
 Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
 Van Dorn Electric Tool Co., Towson, Md.
 York Electric & Machine Co., York, Pa.

Shears, Rotary, Slitting, Hand

• Barth Mfg. Co., Milldale, Conn.
 • Marshalltown Mfg. Co., Marshalltown, Iowa.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 • Ward Machinery Co., Chicago, Ill.

Shears, Rotary, Slitting, Power

Bliss Co., E. W., Canton, Ohio.
 Kling Bros. Engineering Works, Chicago, Ill.
 • Marshalltown Mfg. Co., Marshalltown, Iowa.
 • Niagara Machine & Tool Works, Buffalo, N. Y.

• Peck, Stow & Wilcox Co., Southington, Conn.
 Simonds Saw & Steel Co., Fitchburg, Mass. (Knives)
 Wheelock Co., Geo. F., Birmingham, Ala.
 Whiting Corp., Harvey, Ill.
 Yoder Co., Cleveland, Ohio.

Shears, Squaring, Foot

Acme Equipment Co., Inc., Chicago, Ill.
 • Barth Mfg. Co., Milldale, Conn.
 Bertsch & Co., Cambridge City, Ind.
 Dreis Co., Ltd., Edward J., San Carlos, Calif.
 Famco Machine Co., Racine, Wis.
 Frederick Iron & Steel, Inc., Frederick, Md.
 Highland Engineering Co., Santa Monica, Calif.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 • Whitney Metal Tool Co., Rockford, Ill.
 • Wysong & Miles Co., Greensboro, N. C.

Shears, Squaring, Power

Acme Equipment Co., Inc., Chicago, Ill.
 • Barth Mfg. Co., Milldale, Conn.
 Bertsch & Co., Cambridge City, Ind.
 Bliss & Co., E. W., Canton, Ohio.
 Cincinnati Shaper Co., Cincinnati, Ohio.
 Cleveland Punch & Shear Works Co., Cleveland, Ohio.
 Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.
 Diamond Machine Tool Co., Los Angeles, Calif.
 Dreis Co., Ltd., Edward J., San Carlos, Calif.
 Excelsior Tool & Machine Co., East St. Louis, Ill.
 Famco Machine Co., Racine, Wis.
 Frederick Iron & Steel, Inc., Frederick, Md.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 O'Neil-Irwin Mfg. Co., Lake City, Minn.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
 Streine Tool & Mfg. Co., New Bremen, Ohio.
 Thomas Machine Mfg. Co., Pittsburgh, Pa. (1/4 in. and heavier)
 • Whitney Metal Tool Co., Rockford, Ill.
 • Wysong & Miles Co., Greensboro, N. C.

Slip Roll Forming, Hand

• Barth Mfg. Co., Milldale, Conn.
 Berkroy Products, Inc., Burbank, Calif.
 Bertsch & Co., Cambridge City, Ind.
 Frederick Iron & Steel, Inc., Frederick, Md.
 Hendley & Whittemore Co., Beloit, Wis.
 • Milton Equipment Co., Philadelphia, Pa.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 O'Neil-Irwin Mfg. Co., Lake City, Minn.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Riverside Machinery Co., Minneapolis, Minn.
 • San Angelo Foundry & Machine Co., San Angelo, Texas.
 • Wysong & Miles Co., Greensboro, N. C.

Slip Roll Forming, Power

Bertsch & Co., Cambridge City, Ind.
 Hendley & Whittemore Co., Beloit, Wis.
 Kling Bros. Engineering Works, Chicago, Ill.
 • Maplewood Machinery Co., Chicago, Ill.
 • Milton Equipment Co., Philadelphia, Pa.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Reed Engineering Co., Carthage, Mo.
 • San Angelo Foundry & Machine Co., San Angelo, Texas.
 • Wysong & Miles Co., Greensboro, N. C.

Slitting, Hand

• Barth Mfg. Co., Milldale, Conn.
 Berkroy Products, Inc., Burbank, Calif.
 Bertsch & Co., Cambridge City, Ind.
 • Beverly Shear Mfg. Co., Chicago, Ill.
 Buffalo Forge Co., Buffalo, N. Y.
 Hendley & Whittemore Co., Beloit, Wis.
 Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 • Ward Machinery Co., Chicago, Ill.
 • Whitney Metal Tool Co., Rockford, Ill.

Slitting, Power

Bertsch & Co., Cambridge City, Ind.
 • Besco Mfg. Co., Cincinnati, Ohio.
 Bliss Co., E. W., Canton, Ohio.
 Buffalo Forge Co., Buffalo, N. Y.
 Callahan Can Machine Co., Inc., Brooklyn, N. Y.
 • Dahlstrom Machine Works, Chicago, Ill.
 Hendley & Whittemore Co., Beloit, Wis.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Kane & Roach, Inc., Syracuse, N. Y.
- Libert Machine Co., Green Bay, Wis.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- St. Louis Tool Co., St. Louis, Mo.
- Streine Tool & Mfg. Co., New Bremen, Ohio.
- Whiting Corp., Harvey, Ill.
- Yoder Co., Cleveland, Ohio.

Wiring, Hand

- Barth Mfg. Co., Milldale, Conn.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

Wiring, Power

- Callahan Can Machine Co., Inc., Brooklyn, N. Y.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.

MALLETS, METAL WORKING

- Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
- Bernz Co., Otto, Rochester, N. Y. (Dogwood)
- Chicago Rawhide Mfg. Co., Chicago, Ill.
- Densewood Co., Elkhorn, Wis. (Wood)
- Goodrich Co., B. F., Akron, Ohio. (Rubber)
- Greene, Tweed & Co., New York, N. Y. (Plastic, rawhide; composition, copper & babbitt)
- Lignum-Vitae Products Corp., Jersey City, N. J.
- Maplewood Machinery Co., Chicago, Ill.
- Morey, Dan, Los Angeles, Calif.
- New Plastic Corp., Hollywood, Calif. (Plastic)
- Niagara Machine & Tool Works, Buffalo, N. Y. (Hickory)
- Republic Rubber Div. Lee Rubber & Tire Corp., Youngstown, Ohio. (Rubber)
- Schmidgall Mfg. Co., Inc., Peoria, Ill. (Plastic)
- Southwest Mfg. Co., Santa Ana, Calif. (Plastic tipped)
- Stanley Tools, New Britain, Conn. (Soft face hammers)
- Stossel & Sons Co., Carl, Front Royal, Va. (Hickory & dogwood)

MATS, EVAPORATIVE COOLER

- Morey, Dan, Los Angeles, Calif. (Aspen)
- Owens-Corning Fiberglass Corp., Toledo, Ohio. (Glass)
- Palmer Mfg. Corp., Phoenix, Ariz.

METAL CEILINGS

See Ceilings, Metal

METAL HOSE

See Hose

METAL SPRAY GUNS

See Guns, Spray, Metals

METAL STAMPINGS

See Stampings, Metal

METALS, PERFORATED, SHEET AND PLATE

- Beckley Perforating Co., Garwood, N. J.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Chicago Perforating Co., Chicago, Ill.
- Cross Engineering Co., Carbondale, Pa.
- Diamond Mfg. Co., Wyoming, Pa.
- Erdle Perforating Co., Rochester, N. Y.
- Harrington & King Perforating Co., Chicago, Ill.
- Harrison Sheet Steel Co., Chicago, Ill.
- Hendrick Mfg. Co., Carbondale, Pa.
- Johnston & Chapman Co., Chicago, Ill.
- Littleford Bros., Inc., Cincinnati, Ohio.
- Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
- Mundt & Sons, Charles, Jersey City, N. J.
- Nortmann-Duffke Co., Milwaukee, Wis.
- Penn Metal Co., Inc., New York, N. Y.
- Reynolds Metals Co., Louisville, Ky. (Aluminum)
- Rigidized Metals Corp., Buffalo, N. Y.
- Standard Stamping & Perforating Co., Chicago, Ill.
- Wheeling Corrugating Co., Wheeling, W. Va. (Expanded)

METERS, AIR VELOCITY, DIRECT READING

- Bacharach Industrial Instrument Co., Pittsburgh, Pa.
- Detroit Air Conditioning Service Co., Detroit, Mich.

- Hays Corp., Michigan City, Ind.
- Illinois Testing Laboratories, Inc., Chicago, Ill.
- Taylor Instrument Cos., Rochester, N. Y.

MONORAIL SYSTEMS

(Truck, Trolley, Hoist, Accessories)

- American MonoRail Co., Cleveland, Ohio.
- Chicago Tramrail Co., Chicago, Ill.
- Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.
- Ferdon Equipment Engineering Co., Hillside, N. J.
- Louden Machinery Co., Fairfield, Iowa.
- Philadelphia Tramrail Co., Philadelphia, Pa.
- Reading Chain & Block Corp., Reading, Pa.
- Richards-Wilcox Mfg. Co., Aurora, Ill.
- Webb Co., Jervis B., Detroit, Mich.
- Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.

MOTOR TRUCKS

See Trucks, Motor

MOTORS, DUCT, DAMPER, MODULATING OR PROPORTIONING

See Controls

MOTORS, DUCT, DAMPER, TWO POSITION

See Controls

MOTORS, DRAFT, DAMPER, ELECTRICAL

See Controls

MOTORS, ELECTRIC

Fractional H.P.

- Baldor Electric Co., St. Louis, Mo.
- Barber-Colman Co., Rockford, Ill.
- Bodine Electric Co., Chicago, Ill.
- Brown-Brockmeyer Co., Inc., Dayton, Ohio.
- Canatsey Electric Mfg. Co., Kansas City, Mo.
- Century Electric Co., St. Louis, Mo.
- Delco Appliance Div. General Motors Corp., Rochester, N. Y.
- Delco Products Div. General Motors Corp., Dayton, Ohio.
- Diehl Mfg. Co., Somerville, N. J.
- Eastern Air Devices, Inc., Brooklyn, N. Y.
- Electric Motor Corp., Div., Howard Industries, Inc., Racine, Wis.
- Electric Spray Co., Sheboygan, Wis.
- Emerson Electric Mfg. Co., St. Louis, Mo.
- Fairbanks, Morse & Co., Chicago, Ill.
- Fasco Industries, Inc., Rochester, N. Y.
- Franklin Electric Co., Inc., Bluffton, Ind.
- General Die & Stamping Co., New York, N. Y.
- General Electric Co., Schenectady, N. Y.
- Holtzer-Cabot Div. National Pneumatic Co., Inc., Boston, Mass.
- Jack & Heintz Precision Industries, Inc., Cleveland, Ohio.
- Kingston-Conley Div., Hoover Co., North Plainfield, N. J.
- Lamb Electric Co., Kent, Ohio.
- Leland Electric Co., Inc., Dayton, Ohio.
- Marathon Electric Mfg. Corp., Wausau, Wis.
- Master Electric Co., Dayton, Ohio.
- Morey, Dan, Los Angeles, Calif.
- Ohio Electric Mfg. Co., Cleveland, Ohio.
- Packard Electric Div., General Motors Corp., Warren, Ohio.
- Peerless Electric Co., Warren, Ohio.
- Pioneer Gen-E-Motor, Chicago, Ill.
- Redmond Co., A. G., Owosso, Mich.
- Reynolds Electric Co., River Grove, Ill.
- Robbins & Myers, Inc., Springfield, Ohio.
- Rotor Corp., Dayton, Ohio.
- Signal Electric Mfg. Co., Menominee, Mich.
- Small Motors, Inc., Chicago, Ill.
- Smith Corp., A. O., Milwaukee, Wis.
- Speedway Mfg. Co., Cicero, Ill.
- Torq Electric Corp., Bedford, Ohio.
- Wagner Electric Corp., St. Louis, Mo.
- Westinghouse Electric Corp., Pittsburgh, Pa.
- Whirlaway Motors, Tippecanoe City, Ohio.

1 H.P. and Over

- Allis-Chalmers Mfg. Co., Milwaukee, Wis.
- Allis Co., Louis, Milwaukee, Wis.
- Baldor Electric Co., St. Louis, Mo.
- Bogue Electric Co., Paterson, N. J.
- Brown-Brockmeyer Co., Inc., Dayton, Ohio.
- Century Electric Co., St. Louis, Mo.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Crocker-Wheeler Div. Elliott Co., Ampere, N. J.
- Delco Products Div., General Motors Corp., Dayton, Ohio.
- Diehl Mfg. Co., Somerville, N. J.
- Electric Machinery Mfg. Co., Minneapolis, Minn.
- Electro Dynamic Div., Electric Boat Co., Bayonne, N. J.
- Emerson Electric Mfg. Co., St. Louis, Mo.
- Fairbanks, Morse & Co., Chicago, Ill.
- General Electric Co., Schenectady, N. Y.
- Holtzer-Cabot Div. National Pneumatic Co., Inc., Boston, Mass.
- Ideal Electric & Mfg. Co., Mansfield, Ohio.
- Imperial Electric Co., Akron, Ohio.
- Kingston-Conley Div., Hoover Co., North Plainfield, N. J.
- Leland Electric Co., Inc., Dayton, Ohio.
- Marathon Electric Mfg. Corp., Wausau, Wis.
- Marble-Card Electric Co., Gladstone, Mich.
- Master Electric Co., Dayton, Ohio.
- Peerless Electric Co., Warren, Ohio.
- Philadelphia Gear Works, Inc., Philadelphia, Pa. (Geared)
- Reliance Elec. & Engr. Co., Cleveland, Ohio.
- Robbins & Meyers, Inc., Springfield, Ohio.
- Smith Corp., A. O., Milwaukee, Wis.
- Star Electric Motor Co., Bloomfield, N. J.
- Sterling Electric Motors, Inc., Los Angeles, Calif.
- U. S. Electrical Motors, Inc., Los Angeles, Calif.
- Valley Electric Co., St. Louis, Mo.
- Wagner Electric Corp., St. Louis, Mo.
- Westinghouse Electric Corp., Pittsburgh, Pa.

MOULDING AND TRIM, ORNAMENTAL, FOR CABINETS AND CASINGS

- Alden Mfg. Co., Painesville, Ohio.
- Allmetal Weatherstrip Co., Chicago, Ill.
- Aluminum Co. of America, Pittsburgh, Pa.
- Aluminum Goods Mfg. Co., Manitowoc, Wis. (Aluminum & stainless)
- American Insulator Corp., New Freedom, Pa. (Plastic)
- Brasco Mfg. Co., Harvey, Ill.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Dahlstrom Metallic Door Co., Jamestown, N. Y.
- Detroit Moulding Div., L. A. Young Spring & Wire Corp., Detroit, Mich.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Empire Door Co., Inc., New York, N. Y.
- Extruded Plastics, Inc., Norwalk, Conn.
- Friedley-Voshardt Co., Chicago, Ill.
- Herron-Zimmers Moulding Co., Detroit, Mich.
- Jamestown Metal Corp., Jamestown, N. Y.
- Kawneer Co., Niles, Mich.
- Maysteel Products, Inc., Milwaukee, Wis.
- Miller & Doing, Brooklyn, N. Y.
- National Metal Fabricators, Chicago, Ill.
- Pyramid Mouldings, Inc., Chicago, Ill.
- Revere Copper & Brass Inc., New York, N. Y.
- Rigidized Metals Corp., Buffalo, N. Y.
- Sponge Rubber Products Co., Shelton, Conn. (Sponge rubber gaskets)
- Werner Co., Inc., R. D., New York, N. Y.

MOULDINGS AND TRIM FOR SIDING AND SHINGLES

- Allmetal Weatherstrip Co., Chicago, Ill. (Zinc)
- Appleton Supply Co., Inc., Appleton, Wis. (Aluminum, zinc)
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Inland Steel Products Co., Milwaukee, Wis. (Corners)
- Klauser Mfg. Co., Dubuque, Iowa.
- New Delphos Mfg. Co., Delphos, Ohio. (Corners)
- Penn Supply & Metal Corp., Philadelphia, Pa.
- Reynolds Metals Co., Louisville, Ky. (Aluminum)
- Royal-Apex Mfg. Corp., Brooklyn, N. Y. (Bull nose corner bead)
- Sioux Steel Co., Sioux Falls, S. Dak.
- Werner Co., R. D., Inc., New York, N. Y.

NAILS

Aluminum

- Aluminum Co. of America, Pittsburgh, Pa.
- Dickson Weatherproof Nail Co., Evanston, Ill.
- Hassall, Inc., John, Brooklyn, N. Y.
- Independent Nail & Packing Co., Bridgewater, Mass.
- Kaiser Aluminum & Chemical Corp., Oakland, Calif.
- Maze Co., W. H., Peru, Ill.
- New Holland Metals Co., Div. of New Holland Machine Co., Mountville, Pa.
- Nichols Wire & Aluminum Co., Davenport, Iowa.
- Potts-Farrington Co., Philadelphia, Pa.
- Reynolds Metals Co., Louisville, Ky.

Copper

- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
- Copperweld Steel Co., Glassport, Pa.
- Harper Co., H. M., Morton Grove, Ill.
- Hassall, Inc., John, Brooklyn, N. Y.
- Hussey & Co., C. G., Pittsburgh, Pa.
- Independent Nail & Packing Co., Bridgewater, Mass.
- Maze Co., W. H., Peru, Ill.

Hardened Masonry

- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Hillwood Mfg. Co., Cleveland, Ohio.
- Independent Nail & Packing Co., Bridgewater, Mass.
- Parker-Kalon Corp., New York, N. Y.
- Rawlplug Co., Inc., New York, N. Y. (Bolts)
- Tremont Nail Co., Wareham, Mass.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.
- Wood Steel Co., Alan, Conshohocken, Pa.

Roofing

- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Conklin Brass & Copper Co., Inc., T. E., New York, N. Y. (Copper)
- Continental Steel Corp., Kokomo, Ind. (Steel)
- Copperweld Steel Co., Glassport, Pa. (Copper coated steel)
- Deniston Co., Chicago, Ill. (Steel & aluminum)
- Dickson Weatherproof Nail Co., Evanston, Ill. (Lead headed)
- Hassall, Inc., John, Brooklyn, N. Y. (Copper)
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Independent Nail & Packing Co., Bridgewater, Mass.
- Inland Steel Products Co., Milwaukee, Wis. (Steel wire)
- Jones & Laughlin Steel Corp., Pittsburgh, Pa.
- Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
- Maze Co., W. H., Peru, Ill.
- New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
- Newport Steel Corp., Newport, Ky.
- Republic Steel Corp., Cleveland, Ohio.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- Wickwire Spencer Steel Div. Colorado Fuel & Iron Corp., New York, N. Y. (Steel)

Screw, Hardened

- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Deniston Co., Chicago, Ill. (Pallet)
- Dickson Weatherproof Nail Co., Evanston, Ill.
- Hillwood Mfg. Co., Cleveland, Ohio. (Drive)
- Independent Nail & Packing Co., Bridgewater, Mass.
- Industrial Screw Co., Chicago, Ill.
- Maze Co., W. H., Peru, Ill.
- Parker-Kalon Corp., New York, N. Y.
- Republic Steel Corp., Cleveland, Ohio.

Stainless Steel

- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Dickson Weatherproof Nail Co., Evanston, Ill.
- Harper Co., H. M., Morton Grove, Ill.
- Hassall, Inc., John, Brooklyn, N. Y.
- Independence Nail & Packing Co., Bridgewater, Mass.
- Maze Co., W. H., Peru, Ill.
- Republic Steel Corp., Cleveland, Ohio.
- Tremont Nail Co., Wareham, Mass.

Zinc Coated

- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Continental Steel Corp., Kokomo, Ind.
- Dickson Weatherproof Nail Co., Evanston, Ill.
- Hassall, Inc., John, Brooklyn, N. Y.
- Independent Nail & Packing Co., Bridgewater, Mass.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Inland Steel Products Co., Milwaukee, Wis.
- Jones & Laughlin Steel Corp., Pittsburgh, Pa.
- Maze Co., W. H., Peru, Ill.
- New Delphos Mfg. Co., Delphos, Ohio.
- Republic Steel Corp., Cleveland, Ohio.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- Tremont Nail Co., Warcham, Mass.
- Wheeling Steel Corp., Wheeling, W. Va.

NIBBLERS

See Machines, Nibbling

NIGHT AIR FANS

See Fans, Night Air Cooling

NOZZLES, OIL BURNER

- Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
- Benjamin Air Rifle Co., St. Louis, Mo.
- Boston Machine Works Co., Lynn, Mass. (Also nozzle kit)
- Delavan Mfg. Co., Des Moines, Iowa.
- Hasko Utilities Co., New York, N. Y.
- Monarch Mfg. Works, Inc., Philadelphia, Pa.

NOZZLES, SPRAY, WATER

- American Cooling Tower Co., Kansas City, Mo.
- April Showers Co., Inc., Washington, D. C. (Roof cooling)
- Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
- Benjamin Air Rifle Co., St. Louis, Mo.
- Binks Mfg. Co., Chicago, Ill.
- Blower Application Co., Milwaukee, Wis.
- Buffalo Forge Co., Buffalo, N. Y.
- Chain Belt Co., Milwaukee, Wis.
- Clarage Fan Co., Kalamazoo, Mich.
- Delavan Mfg. Co., Des Moines, Iowa.
- Electric Spray Co., Sheboygan, Wis.
- Handelan Air Washer Co., Minneapolis, Minn.
- Link-Belt Co., Chicago, Ill.
- Maid-O'-Mist, Inc., Chicago, Ill.
- Marley Co., Inc., Kansas City, Kans.
- Martocello & Co., Jos. A., Philadelphia, Pa.
- Monarch Mfg. Works, Inc., Philadelphia, Pa.
- Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
- Plummer Spray Equipment Co., Napoleon, Ohio.
- Rega Mfg. Co., Rochester, N. Y.
- Ross Sprinkler Co., Pasadena, Calif.
- Spray Engineering Co., Bellwood, Ill.
- Spraying Systems Co., Somerville, Mass.
- Supreme Electric Products Corp., Rochester, N. Y.
- Thermal Industries, Indio, Calif.
- U. S. Gutta Percha Paint Co., Providence, R. I.
- Water Cooling Corp., New York, N. Y.
- Water Cooling Equipment Corp., St. Louis, Mo.
- Yarnall-Waring Co., Philadelphia, Pa.

ODOR ADSORBERS

See Adsorbers, Odor

OIL BURNER CONTROLS

See Controls; Control Systems

OIL BURNER FITTINGS AND ACCESSORIES

See Fittings and Accessories, Oil Burner; Filters; Gauges; Nozzles

OIL BURNERS

See Burners, Oil

ORNAMENTS, SHEET METAL

See Mouldings and Trim, Ornamental

OZONE APPARATUS

- Coroaire Heater Corp., Cleveland, Ohio.
- Electroaire Corp., Long Island City, N. Y.
- Montgomery Bros., San Francisco, Calif.
- Norwood Filtration Co., Holyoke, Mass.
- Scottdale Ozone Co., Scottdale, Pa.

PAINT, ROOFING

- American-Marietta Co., Chicago, Ill.
- Baer Bros., New York, N. Y.
- Barrett Div., Allied Chemical & Dye Corp., New York, N. Y. (Pitch)
- Blue Ridge Talc Co., Inc., Henry, Va.
- Cabot, Inc., Samuel, Boston, Mass.
- Calbar Paint & Varnish Co., Philadelphia, Pa.
- Carey Mfg. Co., Philip, Cincinnati, Ohio.

- Carter Paint Co., Liberty, Ind.
- Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
- Clinton Metallic Paint Co., Clinton, N. Y. (Red metallic)
- Connors Paint Mfg. Co., Wm., Troy, N. Y.
- Continental Products Co., Euclid, Ohio.
- Debevoise Co., Brooklyn, N. Y.
- Devoe & Reynolds Co., Inc., New York, N. Y.
- du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
- Eagle-Picher Co., Cincinnati, Ohio.
- Evercrete Corp., New York, N. Y.
- Flintkote Co., New York, N. Y.
- Glidden Co., Cleveland, Ohio.
- Hetzel Roofing Products Co., Newark, N. J.
- Horn Co., Inc., A. C., Long Island City, N. Y.
- Illinois Bronze Powder Co., Inc., Chicago, Ill.
- Inter-Coastal Paint Co., East St. Louis, Ill.
- Iowa Paint Mfg. Co., Des Moines, Iowa. (Asphalt)
- Koppers Co., Inc., Pittsburgh, Pa.
- Lastik Products Co., Inc., Pittsburgh, Pa. (Asphalt & fiber)
- Lehon Co., Chicago, Ill.
- Lexington Supply Co., Cleveland, Ohio.
- Lucas & Co., Inc., John, Philadelphia, Pa.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- Metropolitan Refining Co., Inc., Long Island City, N. Y.
- Midland Paint & Varnish Co., Cleveland, Ohio.
- Mortell Co., J. W., Kankakee, Ill.
- National Mfg. Corp., Tonawanda, N. Y.
- Nebel Mfg. Co., Cleveland, Ohio.
- North American Mogul Products Co., Cleveland, Ohio.
- Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt)
- Pecora Paint Co., Philadelphia, Pa.
- Pittsburgh Plate Glass Co., Pittsburgh, Pa.
- Potts-Farrington Co., Philadelphia, Pa.
- Presstite Engineering Co., St. Louis, Mo.
- Proie & Coogan Heating Co., Pittsburgh, Pa.
- Quigley Co., Inc., New York, N. Y.
- Reilly Tar & Chemical Corp., Indianapolis, Ind.
- Ruberoil Co., New York, N. Y.
- Rutland Fire Clay Co., Rutland, Vt. (Asphalt)
- Sherwin-Williams Co., Cleveland, Ohio.
- Sipe & Co., James B., Pittsburgh, Pa.
- Sonneborn Sons, Inc., L., New York, N. Y.
- Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
- Tamm Industries Inc., Chicago, Ill.
- Thompson & Co., Oakmont, Pa.
- Toch Bros., Inc., Staten Island, N. Y.
- Tropical Paint & Oil Co., Cleveland, Ohio.
- Truscon Laboratories, Detroit, Mich.

PAINT, SHEET METAL

(Aluminum, Finish Coat, Prime Coat, etc.)

- American-Marietta Co., Chicago, Ill.
- Atlas Powder Co., North Chicago, Ill.
- Baer Bros., New York, N. Y. (Aluminum)
- Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
- Blue Ridge Talc Co., Inc., Henry, Va.
- Cabot, Inc., Samuel, Boston, Mass. (Aluminum, metal protecting)
- Calbar Paint & Varnish Co., Philadelphia, Pa. (Aluminum, finish coat)
- Carboline Co., St. Louis, Mo. (Aluminum, finish coat & prime coat)
- Carey Co., Philip, Cincinnati, Ohio. (Aluminum)
- Carter Paint Co., Liberty, Ind.
- Champion Bronze Powder & Paint Co., Chicago, Ill.
- Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
- Connors Paint Mfg. Co., Wm., Troy, N. Y.
- Continental Products Co., Euclid, Ohio. (Aluminum, finish coat)
- Coopers Creek Chemical Corp., West Conshohocken, Pa. (Aluminum, finish coat)
- Cordo Chemical Corp., Norwalk, Conn. (Acid and alkali resistant coatings)
- Devoe & Reynolds Co., Inc., New York, N. Y. (Aluminum, finish coat)
- du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Aluminum, prime coat & finish coat)
- Eagle-Picher Co., Cincinnati, Ohio. (Aluminum, finish coat)
- Flood Co., Hodson, Ohio.
- Glidden Co., Cleveland, Ohio. (Aluminum, finish coat)
- Hague & Co., Alfred, Brooklyn, N. Y. (Aluminum, finish coat)
- Hetzel Roofing Products Co., Newark, N. J. (Aluminum, finish coat)
- Hilo Varnish Corp., Brooklyn, N. Y. (Zinc chromate)
- Horn Co., Inc., A. C., Long Island City, N. Y. (Aluminum, finish coat)
- Illinois Bronze Powder Co., Inc., Chicago, Ill. (Aluminum)
- Inter-Coastal Paint Co., East St. Louis, Ill. (Prime coat, finish coat)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

coat & sound deadening)
 Iowa Paint Mfg. Co., Des Moines, Iowa.
 Irvington Varnish & Insulator Co., Irvington, N. J. (Finish coat)
 Koppers Co., Inc., Pittsburgh, Pa. (Aluminum, finish coat)
 Lastik Products Co., Inc., Pittsburgh, Pa. (Aluminum, prime coat & finish coat)
 Lehon Co., Chicago, Ill. (Aluminum)
 Lucas & Co., Inc., John, Philadelphia, Pa.
 Maas & Waldstein Co., Newark, N. J.
 Midland Paint & Varnish Co., Cleveland, Ohio. (Aluminum, finish coat)
 National Engineering Products, Inc., Washington, D. C.
 National Lead Co., New York, N. Y. (Prime, finish coat)
 National Mfg. Corp., Tonawanda, N. Y. (Aluminum)
 Nebel Mfg. Co., Cleveland, Ohio. (Aluminum, finish coat)
 North American Mogul Products Co., Cleveland, Ohio. (Finish coat)
 O'Brien Corp., South Bend, Ind. (Aluminum, finish coat & prime coat)
 Ohmlac Paint & Refining Co., Chicago, Ill. (Finish coat)
 Pabco Products Inc., San Francisco, Calif. (Aluminum, prime coat & finish coat)
 Patterson-Sargent Co., Cleveland, Ohio.
 Pecora Paint Co., Philadelphia, Pa. (Aluminum, finish coat)
 Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Aluminum, finish coat)
 Prestite Engineering Co., St. Louis, Mo. (Aluminum)
 Proie & Coogan Heating Co., Pittsburgh, Pa.
 Quigley Co., Inc., New York, N. Y. (Aluminum, finish coat)
 Reilly Tar & Chemical Corp., Indianapolis, Ind.
 Reynolds Metals Co., Louisville, Ky. (Aluminum)
 Robertson Co., H. H., Pittsburgh, Pa.
 Rust-Oleum Corp., Evanston, Ill. (Aluminum, prime coat, finish coat & rust preventive coatings)
 Rutland Fire Clay Co., Rutland, Vt. (Prime coat)
 Sanwin Chemical Products Co., Moline, Ill.
 Sherwin-Williams Co., Cleveland, Ohio. (Aluminum)
 Sipe & Co., James B., Pittsburgh, Pa. (Aluminum, prime coat & finish coat)
 Socony Paint Products Div., Socony-Vacuum Oil Co., Inc., New York, N. Y.
 Sonneborn Sons, Inc., L., New York, N. Y. (Aluminum, finish coat)
 Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
 Speco, Inc., Cleveland, Ohio (Aluminum)
 Tamm Industries, Inc., Chicago, Ill. (Finish coat)
 Thompson & Co., Oakmont, Pa. (Aluminum, finish coat)
 Toch Brothers, Inc., Staten Island, N. Y. (Finish coat)
 Tropical Paint & Oil Co., Cleveland, Ohio. (Aluminum, finish coat)
 Truscon Laboratories, Detroit, Mich. (Aluminum, prime coat & finish coat)
 Turco Products, Inc., Los Angeles, Calif.
 United Chromium, Inc., New York, N. Y. (Aluminum, finish coat)
 United Gilsonite Laboratories, Scranton, Pa.
 U. S. Gutta Percha Paint Co., Providence, R. I. (Aluminum, finish coat)
 United States Stoneware Co., Akron, Ohio. (Aluminum, finish coat)
 Wilbur & Williams Co., Boston, Mass.

PAINT SPRAY GUNS

See Guns, Spray, Paint

PAPER, ASBESTOS

- Acme Asbestos Covering & Flooring Co., Chicago, Ill.
- Alfol Div., Reflectal Corp., New York, N.Y.
- Carey Mfg. Co., Philip, Cincinnati, Ohio.
- Ehret Magnesia Mfg. Co., Valley Forge, Pa.
- Johns-Manville, New York, N. Y.
- Kearsey & Mattison Co., Ambler, Pa.
- Norristown Magnesia & Asbestos Co., Norristown, Pa.
- Ruberoil Co., New York, N. Y.
- Sall Mountain Co., Chicago, Ill.
- Standard Asbestos Mfg. Co., Chicago, Ill.
- Wilson, Inc., Grant, Chicago, Ill.

PASTE, ASBESTOS PAPER

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
 Arabol Mfg. Co., New York, N. Y. (Insulation adhesive)
 Clark Stek-O Corp., Rochester, N. Y.
 Lyon, Conklin & Co., Inc., Baltimore, Md.

Norristown Magnesia & Asbestos Co., Norristown, Pa.
 Rutland Fire Clay Co., Rutland, Vt.
 Sall Mountain Co., Chicago, Ill.
 Standard Asbestos Mfg. Co., Chicago, Ill.
 Western Mineral Products Co., Minneapolis, Minn.
 • Wilson, Inc., Grant, Chicago, Ill.

PATTERNS, BLUE PRINT, ELBOWS, SKYLIGHTS AND FITTINGS

Gray, G. L., New Haven, Conn.

PERFORATED METAL

See Metals, Perforated, Sheet and Plate

PILLOW BLOCKS

See Bearings, Pillow Block

PILOTS, GAS BURNER

See Controls

PIPE

Conductor

- Acme Mfg. Co., Philadelphia, Pa. (Aluminum, galv., & copper)
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Alabama Metal Lath Co., Birmingham, Ala. (Steel & copper)
- Barnes Metal Products Co., Chicago, Ill.
- Berger Bros. Co., Philadelphia, Pa.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Braden Mfg. Co., Terre Haute, Ind.
- Campbell Stainless Products Co., Washington, Pa. (Stainless steel)
- Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
- Downs-Smith Brass & Copper Co., New York, N. Y.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
- Globe Iron Roofing & Corrugating Co., Newport, Ky.
- Herbert & Sons, R. D., Nashville, Tenn.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Inland Steel Products Co., Milwaukee, Wis. (Copper & galv.)
- Johns-Manville, New York, N. Y.
- Klauser Mfg. Co., Dubuque, Iowa.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Galv. steel)
- Lamb & Ritchie Co., Cambridge, Mass. (Galvanized & copper)
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc & galv. steel)
- Miller & Doing, Brooklyn, N. Y.
- New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
- Newport Steel Corp., Newport, Ky.
- Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
- Obdyke, Inc., B. P., Philadelphia, Pa.
- Overly Mfg. Co., Greensburg, Pa.
- Penn Supply & Metal Corp., Philadelphia, Pa. (Galv.)
- Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. steel)
- Reynolds Metals Co., Louisville, Ky. (Aluminum)
- Riggin Metal Products, Inc., Kankakee, Ill.
- St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
- Schechter Bros. Co., Philadelphia, Pa. (Galv. steel & copper)
- Schoedinger, F. O., Columbus, Ohio. (Galv. stainless steel, & copper)
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sheet Metal Products Co., Peoria, Ill.
- Souther Iron Co., E. E., St. Louis, Mo.
- Thor Metal Products Co., Inc., Syracuse, N.Y. (Galv. & copper)
- Tiffin Art Metal Co., Tiffin, Ohio. (Galv., copper, stainless steel, aluminum)
- Wallace Co., William, Metalbestos Div., Belmont, Calif.
- Wheeling Corrugating Co., Wheeling, W. Va. (Galv. steel)
- York Corrugating Co., York, Pa.

Furnace

- Acer & Whedon, Inc., Medina, N. Y.
- Acme Furnace Fitting Co., Chicago, Ill. (Galv. & aluminum)
- Acme Mfg. Co., Philadelphia, Pa.
- Adelta Flow Co., Inc., Philadelphia, Pa.
- Aire Flow Furnace Pipe Co., Detroit, Mich.
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Ballonoff Metal Products Co., Cleveland, Ohio.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Braden Mfg. Co., Terre Haute, Ind.
- Champion Furnace Pipe Co., Peoria, Ill.
- Char-Gale Mfg. Co., Minneapolis, Minn.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Chicago Furnace Supply Co., Chicago, Ill.
 Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
 Clayton & Lambert Mfg. Co., Louisville, Ky.
 Corbman Bros., Inc., Philadelphia, Pa.
 Detroit Safety Furnace Pipe Co., Detroit, Mich.
 Eishach, Albert N., Dubuque, Iowa.
 Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
 Excelsior Steel Furnace Co., Chicago, Ill.
 Excelsior Stove & Mfg. Co., Quincy, Ill.
 Grand Island Furnace & Supply Co., Grand Island, Nebr.
 Gray Metal Products, Inc., Rochester, N. Y.
 Green Colonial Furnace Co., Des Moines, Iowa.
 Henry Furnace Co., Medina, Ohio.
 Herbert & Sons, R. D., Nashville, Tenn.
 Home Furnace Co., Holland, Mich.
 Howes-Woods Co., Cambridge, Mass.
 Inland Steel Products Co., Milwaukee, Wis.
 International Heater Co., Utica, N. Y.
 J & J Sheet Metal Co., Van Dyke, Mich.
 Johns-Manville, New York, N. Y.
 Keith Furnace Co., Des Moines, Iowa.
 Krauser-Boyd, Inc., North Tonawanda, N. Y.
 La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
 Lennox Furnace Co., Marshalltown, Iowa.
 Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
 Lyon, Conklin & Co., Inc., Baltimore, Md.
 Made-Rite Co., Inc., Newport, Ky.
 Majestic Co., Huntington, Ind.
 Maple City Furnace Co., Monmouth, Ill.
 Marshall Furnace Co., Marshall, Mich.
 Meyer & Bro. Co., F., Peoria, Ill.
 Moncrief Furnace Co., Atlanta, Ga.
 Mueller Furnace Co., L. J., Milwaukee, Wis.
 Northwest Metal Products, Inc., Seattle, Wash.
 Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
 Olsen Mfg. Co., C. A., Elyria, Ohio.
 Peerless Foundry Co., Indianapolis, Ind.
 Penn Supply & Metal Corp., Philadelphia, Pa.
 Portland Stove Foundry Co., Portland, Maine.
 Reeves Steel & Mfg. Co., Dover, Ohio.
 Riggan Metal Products, Kankakee, Ill.
 Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
 Schecter Bros. Co., Philadelphia, Pa.
 Schoedinger, F. O., Columbus, Ohio.
 Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
 Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.
 Sioux Steel Co., Sioux Falls, S. D.
 Skinner Htg. & Vent. Co., Heater Div. of St. Louis Blow Pipe & Heater Co., Inc., St. Louis, Mo.
 Southbridge Roofing Co., Inc., Southbridge, Mass.
 Standard Furnace Supply Co., Omaha, Nebr.
 Stratton & Terstege Co., Louisville, Ky.
 Superior Products Co., Omaha, Nebr.
 Thor Metal Products Co., Inc., Syracuse, N. Y.
 Tiffin Art Metal Co., Tiffin, Ohio.
 Tri-State Heating Supply Inc., Fort Wayne, Ind.
 United States Register Co., Battle Creek, Mich.
 Waterman-Waterbury Co., Minneapolis, Minn.
 Waverly Heating Supply Co., Boston, Mass.
 Wheeling Corrugating Co., Wheeling, W. Va.
 Wheelock Co., Geo. F., Birmingham, Ala.
 Wilder Products Co., Springfield, Ohio.
 Wallace Co., William, Metalbestos Div., Belmont, Calif.
 Williamson Heater Co., Cincinnati, Ohio.

Smoke

- Acer & Whedon, Inc., Medina, N. Y.
 Acme Furnace Fitting Co., Chicago, Ill.
 Acme Mfg. Co., Philadelphia, Pa.
 Adelta Mfg. Co., Inc., Philadelphia, Pa. (Galv. & black)
 Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
 Ballonoff Metal Products Co., Cleveland, Ohio.
 Berger Furnace Mfg. Co., Pittsburgh, Pa.
 Bieler & Son, L., Long Island City, N. Y.
 Bovee Furnace Works, Waterloo, Iowa. (Cast Iron)
 Braden Mfg. Co., Terre Haute, Ind.
 Champion Furnace Pipe Co., Peoria, Ill.
 Char-Gale Mfg. Co., Minneapolis, Minn.
 Chicago Furnace Supply Co., Chicago, Ill.
 Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
 Clayton & Lambert Mfg. Co., Louisville, Ky.
 Condensation Engineering Corp., Chicago, Ill.
 Corbman Bros., Inc., Philadelphia, Pa.
 Detroit Safety Furnace Pipe Co., Detroit, Mich.
 Eishach, Albert N., Dubuque, Iowa.

- Excelsior Steel Furnace Co., Chicago Ill.
 Excelsior Stove & Mfg. Co., Quincy, Ill.
 Grand Island Furnace & Supply Co., Grand Island, Nebr.
 Green Colonial Furnace Co., Des Moines, Iowa.
 Henry Furnace Co., Medina, Ohio.
 Herbert & Sons, R. D., Nashville, Tenn.
 Home Furnace Co., Holland, Mich.
 Howes-Woods Co., Cambridge, Mass.
 Inland Steel Products Co., Milwaukee, Wis.
 International Heater Co., Utica, N. Y.
 J & J Sheet Metal Co., Van Dyke, Mich.
 Keith Furnace Co., Des Moines, Iowa.
 Krauser-Boyd, Inc., North Tonawanda, N. Y.
 La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
 Lennox Furnace Co., Marshalltown, Iowa.
 Lyon, Conklin & Co., Inc., Baltimore, Md.
 Made-Rite Co., Inc., Newport, Ky.
 Majestic Co., Huntington, Ind.
 Maple City Furnace Co., Monmouth, Ill.
 Marshall Furnace Co., Marshall, Mich.
 Meyer & Bro. Co., F., Peoria, Ill.
 Mueller Furnace Co., L. J., Milwaukee, Wis.
 Northwest Metal Products, Inc., Seattle, Wash. (Black & galv.)
 Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
 Olsen Mfg. Co., C. A., Elyria, Ohio.
 Peerless Foundry Co., Indianapolis, Ind.
 Penn Supply & Metal Corp., Philadelphia, Pa.
 Portland Stove Foundry Co., Portland, Maine.
 Reeves Steel & Mfg. Co., Dover, Ohio.
 Riggan Metal Products, Kankakee, Ill.
 Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
 Schecter Bros. Co., Philadelphia, Pa.
 Schoedinger, F. O., Columbus, Ohio.
 Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
 Sioux Steel Co., Sioux Falls, S. D.
 Southbridge Roofing Co., Inc., Southbridge, Mass.
 Standard Furnace Supply Co., Omaha, Nebr.
 Stratton & Terstege Co., Louisville, Ky.
 Superior Products Co., Omaha, Nebr.
 Thor Metal Products, Inc., Syracuse, N. Y.
 Tri-State Heating Supply, Inc., Fort Wayne, Ind.
 United States Register Co., Battle Creek, Mich.
 Waterman-Waterbury Co., Minneapolis, Minn.
 Waverly Heating Supply Co., Boston, Mass.
 Wheeling Corrugating Co., Wheeling, W. Va.
 Wilder Products Co., Springfield, Ohio.
 Wallace Co., William, Metalbestos Div., Belmont, Calif.
 Williamson Heater Co., Cincinnati, Ohio.
 Wise Furnace Co., Akron, Ohio.

PIPE LOCK FORMERS

See Machines, Lock Forming

PIPE AND FITTINGS, GAS VENT AND FLUE

- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
 Ballonoff Metal Products Co., Cleveland, Ohio. (Chrome Plated)
 Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain enamel)
 Bovee Furnace Works, Waterloo, Iowa.
 Char-Gale Mfg. Co., Minneapolis, Minn. (Blue and Galvanized)
 Condensation Engineering Corp., Chicago, Ill. (Vitreous Enamel)
 Enderle, Inc., Frank X., Los Angeles, Calif. (Galv. & asbestos)
 Excelsior Steel Furnace Co., Chicago, Ill. (Galvanized)
 Excelsior Stove & Mfg. Co., Quincy, Ill. (Blue & galv.)
 Henry Furnace Co., Medina, Ohio.
 Heremetal Co., Minneapolis, Minn.
 Johns-Manville, New York, N. Y. (Asbestos & cement)
 Laclede Steel Co., St. Louis, Mo. (Butt Weld—wrought steel)
 Tri-State Heating Supply, Inc., Fort Wayne, Ind.
 Van-Packer Corp., Chicago, Ill.
 Wilder Products Co., Springfield, Ohio.
 Wallace Co., William Metalbestos Div., Belmont, Calif.

PIPE AND FITTINGS, SHEET METAL

See Ducts and Duct Fittings, Prefabricated

PITTSBURGH LOCK FORMING MACHINES

See Machines, Pittsburgh Lock Forming

PLATES, METAL

Alloy

- Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
 Aluminum Co. of America, Pittsburgh, Pa.
 American Brass Co., Waterbury, Conn. (Copper)
 Armco Steel Corp., Middletown, Ohio. (Stainless steel)
 Bethlehem Steel Co., Bethlehem, Pa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Bridgeport Brass Co., Bridgeport, Conn.
 Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper and its alloys)
 Dow Chemical Co., Midland, Mich. (Magnesium)
 Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill. (Stainless clad)
 Inland Steel Co., Chicago, Ill.
 International Nickel Co., Inc., New York, N. Y. (Monel, inconel & nickel)
 Jessop Steel Co., Washington, Pa. (Carbon, high speed)
 Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
 Lukens Steel Co., Coatesville, Pa. (Nickel, chromium, copper, manganese, molybdenum, alloys)
 Monarch Alloys, Ravenna, Ohio.
 Republic Steel Corp., Cleveland, Ohio.
 • Revere Copper & Brass Inc., New York, N. Y. (Copper & copper base)
 Reynolds Metals Co., Louisville, Ky. (Aluminum)
 • United States Steel Co., Pittsburgh, Pa.
 Universal-Cyclops Steel Corp., Bridgeville, Pa.
 Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel

- Armo Steel Corp., Middletown, Ohio.
 Bethlehem Steel Co., Bethlehem, Pa.
 Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
 Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill. (Stainless clad)
 Inland Steel Co., Chicago, Ill.
 International Steel Co., Evansville, Ind.
 Jessop Steel Co., Washington, Pa.
 Jones & Laughlin Steel Corp., Pittsburgh, Pa.
 Lukens Steel Co., Coatesville, Pa.
 Republic Steel Corp., Cleveland, Ohio.
 Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
 • United States Steel Co., Pittsburgh, Pa.
 Wood Steel Co., Alan, Conshohocken, Pa.
 Youngstown Sheet & Tube Co., Youngstown, Ohio.

Wrought Iron

- Byers Co., A. M., Pittsburgh, Pa.

POLISHERS

See Buffers, Grinders, Polishers and Sanders

PRECIPITATORS, ELECTROSTATIC

See Filters, Air, Electrostatic

PREFABRICATED DUCTS

See Ducts and Duct Fittings, Prefabricated

PRESSES AND DIES

- Bath Co., Cyril, Cleveland, Ohio.
 Bertsch & Co., Cambridge City, Ind.
 Bliss Co., E. W., Canton, Ohio.
 Callahan Can Machine Co., Inc., Brooklyn, N. Y.
 Cincinnati Shaper Co., Cincinnati, Ohio.
 Clearing Machine Corp., Chicago, Ill. (Presses)
 Cleveland Punch & Shear Works Co., Cleveland, Ohio.
 Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.
 Davis & Son Machine Works, Los Angeles, Calif.
 Diamond Machine Tool Co., Los Angeles, Calif.
 Doelger & Kirsten, Inc., Milwaukee, Wis.
 • Dreis & Krump Mfg. Co., Chicago, Ill.
 Famco Machine Co., Racine, Wis. (Hand, foot, power)
 Frederick Iron & Steel, Inc., Frederick, Md.
 Henry & Wright Div., Hartford-Empire Co., Hartford, Conn.
 Highland Engineering Co., Santa Monica, Calif.
 Munton Mfg. Co., Franklin Park, Ill.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 Pacific Industrial Mfg. Co., Oakland, Calif.
 Ran Corp., Vernon Press Div., Richmond, Calif.
 Swain Mfg. Co., Fred J., St. Louis, Mo.
 Thomas Machine Mfg. Co., Pittsburgh, Pa.
 • Thor Tool & Die Co., Oakland, Calif.
 Vernon Allsteel Press Co., Chicago, Ill.
 • Wales-Strippit Corp., North Tonawanda, N. Y.
 • Ward Machinery Co., Chicago, Ill.
 Wilson, K. R., Buffalo, N. Y.

PSYCHROMETERS, SLING AND HAND ASPIRATED

- Foxboro Co., Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
 G. M. Mfg. Co., New York, N. Y.

- General Scientific Equipment Co., Philadelphia, Pa.
 Grinnell Co., Inc., Providence, R. I.
 H-B Instrument Co., Philadelphia, Pa.
 Hill & Co., E. Vernon, Chicago, Ill.
 Johnson Service Co., Milwaukee, Wis.
 Moeller Instrument Co., Richmond Hill, N. Y.
 Palmer Thermometers, Inc., Norwood, Cincinnati, Ohio.
 Philadelphia Thermometer Co., Philadelphia, Pa.
 Precision Thermometer & Instrument Co., Philadelphia, Pa.
 Tagliabue Instruments Div., Weston Electrical Instrument Corp., Newark, N. J.
 Taylor Instrument Cos., Rochester, N. Y.
 Weiskel Thermometer Corp., New York, N. Y.
 Weston Electrical Instrument Corp., Newark, N. J.

PULLEYS, FAN AND MOTOR

- Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 American Pulley Co., Philadelphia, Pa.
 Browning Mfg. Co., Inc., Maysville, Ky.
 Chicago Die Casting Co., Chicago, Ill.
 Congress Drives, Div. Tann Corp., Detroit, Mich.
 Dayton Rubber Co., Dayton, Ohio.
 Dick Co., Inc., R. & J., Passaic, N. J.
 Dodge Mfg. Corp., Mishawaka, Ind.
 Gates Rubber Co., Inc., Denver, Colo.
 Golden's Foundry & Machine Co., Columbus, Ga.
 Jones Foundry & Machine Co., W. A., Chicago, Ill.
 • Lau Blower Co., Dayton, Ohio.
 Lovejoy Flexible Coupling Co., Chicago, Ill.
 Maurey Mfg. Corp., Chicago, Ill.
 Mitchell Co., Inc., John E., Dallas, Texas. (V-groove)
 Pyott Foundry & Machinery Co., Chicago, Ill.
 Rockwood Mfg. Co., Inc., Indianapolis, Ind.
 Scientiae Tool Co., Dayton, Ohio.
 Spun Steel Div., Automatic Steel Products, Inc., Canton, Ohio.
 Swift Mfg. Co., Inc., Hazel Park, Mich.
 Utility Appliance Corp., Los Angeles, Calif.
 • Webster Electric Co., Racine, Wis.
 Wood's Sons Co., T. B., Chambersburg, Pa.

PULLEYS, FURNACE CHAIN

- Hart & Cooley Mfg. Co., Holland, Mich.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 • United States Register Co., Battle Creek, Mich.

PUMPS, FUEL OIL

- A-P Controls Corp., Milwaukee, Wis.
 Barclay Co., Robt., Chicago, Ill.
 Kraissl Co., Inc., Hackensack, N. J.
 May Oil Burner Div., Gerotor May Corp., Baltimore, Md.
 Polo Pump Co., Polo, Ill.
 Ray Oil Burner Co., San Francisco, Calif. (Industrial)
 Roper Corp., Geo. D., Rockford, Ill.
 • Sundstrand Machine Tool Co., Rockford, Ill.
 Tuthill Pump Co., Chicago, Ill.
 Viking Pump Co., Cedar Falls, Iowa.
 Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
 • Webster Electric Co., Racine, Wis.

PUMPS, RECIRCULATING, EVAPORATIVE COOLERS

- American Metal Products Co., Fort Worth, Texas.
 Babbitt, Inc., New York, N. Y.
 Beckett & Co., Thomas, Dallas, Texas.
 Bell & Gossett Co., Morton Grove, Ill.
 Jabsco Pump Co., Burbank, Calif.
 Kraissl Co., Inc., Hackensack, N. J.
 • Little Giant Vaporizer Co., Oklahoma City, Okla.
 • Morey, Dan, Los Angeles, Calif.
 Myers & Bros. Co., F. E., Ashland, Ohio.
 National Engineering & Mfg. Co., Kansas City, Mo.
 Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
 Yeomans Bros. Co., Chicago, Ill.

PUNCHES AND SHEARS COMBINED, LEVER OPERATED

- Berkroy Products, Inc., Burbank, Calif.
 Buffalo Forge Co., Buffalo, N. Y.
 Cleveland Punch & Shear Works Co., Cleveland, Ohio.
 Excelsior Tool & Machine Co., East St. Louis, Ill.
 Heartley Machine & Tool Co., Toledo, Ohio.
 Hendley & Whittemore Co., Beloit, Wis.
 Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
 National Machine Tool Co., Racine, Wis.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Rotex Punch Co., Oakland, Calif.
 Weiss & Co., H., New York, N. Y.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

PUNCHES, BENCH

- Berkroy Products, Inc., Burbank, Calif.
- Buffalo Forge Co., Buffalo, N. Y.
- Champion Blower & Forge Co., Lancaster, Pa.
- Heartley Machine & Tool Co., Toledo, Ohio.
- Hendley & Whittemore Co., Beloit, Wis.
- Kidder Mfg. Co., J. F., Burlington, Vt.
- Maplewood Machine Co., Chicago, Ill.
- Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- O'Neil-Irwin Mfg. Co., Lake City, Minn.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Rotex Punch Co., Oakland, Calif.
- Thor Tool & Die Co., Oakland, Calif. (Clip punch)
- Weiss & Co., H., New York, N. Y.
- Whitney Mfg. Co., W. A., Rockford, Ill.
- Whitney Metal Tool Co., Rockford, Ill.
- Wiedemann Machine Co., Philadelphia, Pa. (Turret)

PUNCHES, COMBINATION HAND AND BENCH

- Champion Blower & Forge Co., Lancaster, Pa.
- Heartley Machine & Tool Co., Toledo, Ohio.
- Hendley & Whittemore Co., Beloit, Wis.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- O'Neil-Irwin Mfg. Co., Lake City, Minn.
- Parker-Kalon Corp., New York, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Rotex Punch Co., Oakland, Calif.
- Weiss & Co., H., New York, N. Y.
- Whitney Mfg. Co., W. A., Rockford, Ill.
- Whitney Metal Tool Co., Rockford, Ill.
- Wiedemann Machine Co., Philadelphia, Pa.

PUNCHES, HAND

- Berkroy Products, Inc., Burbank, Calif.
- Buffalo Forge Co., Buffalo, N. Y.
- Champion Blower & Forge Co., Lancaster, Pa.
- Cleveland Punch & Shear Works Co., Cleveland, Ohio.
- Crescent Tool Co., Jamestown, N. Y.
- Damascus Steel Products Corp., Rockford, Ill.
- Excelsior Tool & Machine Co., East St. Louis, Ill.
- Hendley & Whittemore Co., Beloit, Wis.
- Ingels Elbow Machine Corp., Chicago, Ill.
- Kidder Mfg. Co., J. F., Burlington, Vt.
- Maplewood Machinery Co., Chicago, Ill.
- Niagara Machine & Tool Works, Buffalo, N. Y.
- Parker-Kalon Corp., New York, N. Y.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Penn Tool Co., Philadelphia, Pa.
- Reiner & Campbell Co., Inc., Newark, N. J.
- Rotex Punch Co., Oakland, Calif.
- Snap-On Tools Corp., Kenosha, Wis.
- Stanley Tools, New Britain, Conn.
- Weiss & Co., H., New York, N. Y.
- West Pacific Co., Portland, Ore.
- Whitney Mfg. Co., W. A., Rockford, Ill.
- Whitney Metal Tool Co., Rockford, Ill.
- Wiedemann Machine Co., Philadelphia, Pa. (Turret)

QUADRANTS, DAMPER

See Regulators

RECORDERS, HUMIDITY, PORTABLE

- Bristol Co., Waterbury, Conn.
- Brown Instrument Co., Div. of Minneapolis-Honeywell Reg. Co., Philadelphia, Pa.
- Foxboro Co., Foxboro, Mass.
- Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
- Leeds & Northrup Co., Philadelphia, Pa.
- Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Palmer Thermometers, Inc., Cincinnati, Ohio.
- Tagliabue Instrument Div. Weston Electrical Instrument Corp., Newark, N. J.
- Taylor Instrument Cos., Rochester, N. Y.
- Weksler Thermometer Corp., New York, N. Y.

RECORDERS, TEMPERATURE, PORTABLE

- Bacharach Industrial Instrument Co., Pittsburgh, Pa.
- Bailey Meter Co., Cleveland, Ohio.
- Bristol Co., Waterbury, Conn.
- Brown Instrument Co., Div. of Minneapolis-Honeywell Reg. Co., Philadelphia, Pa.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Dickson Co., Chicago, Ill.
- Foxboro Co., Foxboro, Mass.

- Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
- Leeds & Northrup Co., Philadelphia, Pa.
- Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Moeller Instrument Co., Richmond Hill, N. Y.
- Palmer Thermometers, Inc., Cincinnati, Ohio.
- Preferred Utilities Mfg. Corp., New York, N. Y.
- Tagliabue Instruments Div. Weston Electrical Instrument Corp., Newark, N. J.
- Taylor Instrument Cos., Rochester, N. Y.
- Weksler Thermometer Corp., New York, N. Y.

REFRACTORIES

- Amerform Corp., Philadelphia, Pa.
- Armstrong Cork Co., Lancaster, Pa. (Insulating)
- Babcock & Wilcox Co., New York, N. Y.
- Bird Archer Co., Philadelphia, Pa.
- Bothfield Refractories Co., Philadelphia, Pa.
- Chicago Fire Brick Co., Chicago, Ill.
- Durex Inc., Chicago, Ill.
- Ehret Magnesia Mfg. Co., Valley Forge, Pa.
- Fireline Stove & Furnace Lining Co., Chicago, Ill. (For hearths and firepot linings)
- Green Fire Brick Co., A. P., Mexico, Mo. (All types fire clay)
- Johns-Manville, New York, N. Y.
- Laclede-Christy Co., St. Louis, Mo. (Fire clay)
- McLeod & Henry Co., Inc., Troy, N. Y.
- Monogram Products Co., Inc., Philadelphia, Pa.
- Munn and Steele, Inc., Newark, N. J.
- Pyrolite Products Co., Cleveland, Ohio.
- Quigley Co., Inc., New York, N. Y.
- Ramite Co., Div. S. Obermayer Co., Chicago, Ill.
- Rehm, R., St. Albans, N. Y. (Radiant)
- Refractory & Insulation Corp., New York, N. Y.
- Rex Roto Corp., Detroit, Mich.
- Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
- Rutland Fire Clay Co., Rutland, Vt. (Retort Cement)
- Standard Fire Engineering Co., Detroit, Mich.
- U. S. Stoneware Co., Akron, Ohio.
- Walsh Refractories Corp., St. Louis, Mo.

REGALVANIZING EQUIPMENT AND MATERIALS

- Ohmer Co., Geo. H., Dayton, Ohio. (Galvanizing alloy)

REGISTER SEALS

See Seals for Registers

REGISTER SHIELDS

See Shields, Warm Air Register

REFRIGERATING UNITS

See Compressors, Refrigerating

REGISTERS

Directional Flow

- A & A Register Co., Cleveland, Ohio.
- A-J Mfg. Co., Kansas City, Mo.
- Air Control Products, Inc., Coopersville, Mich.
- Auer Register Co., Cleveland, Ohio.
- Barber-Colman Co., Rockford, Ill.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Best Register Co., Milwaukee, Wis.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Controlair Mfg. Co., Los Angeles, Calif.
- Diamond Mfg. Co., Wyoming, Pa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Harrison Sheet Steel Co., Chicago, Ill.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- Hendrick Mfg. Co., Carbondale, Pa.
- Independent Register Co., Cleveland, Ohio.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Lima Register Co., Lima, Ohio.
- Midco Register Corp., St. Paul, Minn.
- Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
- Rock Island Register Co., Rock Island, Ill.
- Smith Co., J. B., Philadelphia, Pa.
- Standard Stamping & Perforating Co., Chicago, Ill.
- Stewart Mfg. Co., Cedar Grove, N. J.
- Titus Mfg. Corp., Waterloo, Iowa.
- Tuttle & Bailey, Inc., New Britain, Conn.
- United States Air Conditioning Corp., Minneapolis, Minn.
- United States Register Co., Battle Creek, Mich.
- Utility Appliance Corp., Los Angeles, Calif.
- Young Regulator Co., Cleveland, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Heating and Ventilating

- A & A Register Co., Cleveland, Ohio.
- Acme Mfg. Co., Philadelphia, Pa.
- A-J Mfg. Co., Kansas City, Mo.
- Air Control Products, Inc., Coopersville, Mich.
- American Warming & Ventilating Co., Toledo, Ohio.
- Auer Register Co., Cleveland, Ohio.
- Barber-Colman Co., Rockford, Ill.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Best Register Co., Milwaukee, Wis.
- Brandes Co., Madison, Wis. (Continuous slotted baseboard)
- Brown Steel Tank Co., Minneapolis, Minn.
- Char-Gale Mfg. Co., Minneapolis, Minn.
- Controlair Mfg. Co., Los Angeles, Calif.
- Diamond Mfg. Co., Wyoming, Pa.
- Dole Valve Co., Chicago, Ill.
- Empire Ventilation Equipment Co., Long Island City, N. Y.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Harrington & King Perforating Co., Chicago, Ill.
- Harrison Sheet Steel Co., Chicago, Ill.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Hendrick Mfg. Co., Carbondale, Pa.
- Independent Register Co., Cleveland, Ohio.
- Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Lima Register Co., Lima, Ohio.
- Metal Carrier Corp., Grand Rapids, Mich.
- Midco Register Corp., St. Paul, Minn.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
- Rock Island Register Co., Rock Island, Ill.
- Standard Stamping & Perforating Co., Chicago, Ill.
- Stewart Mfg. Co., Cedar Grove, N. J.
- Titus Mfg. Corp., Waterloo, Iowa.
- Tuttle & Bailey, Inc., New Britain, Conn.
- United States Register Co., Battle Creek, Mich.

REGULATORS, DUCT DAMPER SETS

- Acme Mfg. Co., Philadelphia, Pa.
- Adams Co., Dubuque, Iowa.
- Air Control Products, Inc., Coopersville, Mich.
- A-P Controls Corp., Milwaukee, Wis.
- Barber-Colman Co., Rockford, Ill.
- Cole-Sewell Engineering Co., St. Paul, Minn. (Damper locks)
- Controlair Mfg. Co., Los Angeles, Calif.
- Fossum Mfg. Co., M. H., St. Paul, Minn.
- Gerett Corp., M. A., Milwaukee, Wis.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Kerentoff, G. L., Cincinnati, Ohio.
- Martens & Stormoen, Boston, Mass.
- Mercoid Corp., Chicago, Ill.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Ohio Products Co., Cleveland, Ohio.
- Parker-Kalon Corp., New York, N. Y.
- Perflex Corp., Milwaukee, Wis.
- Sarcoterm Controls, Inc., New York, N. Y.
- United States Register Co., Battle Creek, Mich.
- Severson Mfg. & Supply Co., Milwaukee, Wis.
- Young Regulator Co., Cleveland, Ohio.

REGULATORS, FURNACE DRAFT, MECHANICAL

- Barber-Colman Co., Rockford, Ill.
- Campbell Engineering Co., Appleton, Wis. (Electric)
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Fulton Siphon Div. Robertshaw-Fulton Controls Co., Knoxville, Tenn.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Hays Corp., Michigan City, Ind.
- Little Janitor Furnace Clock Co., New York, N. Y.
- No-No Specialty Co., Cleveland, Ohio.

RELAYS, ELECTRICAL

See Controls

REPAIRS, STOVE AND FURNACE

- Adams Co., Dubuque, Iowa.
- Associated Heating Supplies, Inc., Chicago, Ill.
- Banner Repair Parts Co., Youngstown, Ohio.
- Brauer Supply Co., A. G., St. Louis, Mo.
- Central Furnace & Stove Repair Co., St. Louis, Mo.
- Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
- Clark Co., Henry N., Boston, Mass.
- Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
- Eselgroth & Co., Newark, N. J.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Faultless Heater Corp., Cleveland, Ohio.

- Foote Foundry Co., J. B., Fredericktown, Ohio.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- Kramer Bros. Foundry Co., Dayton, Ohio.
- Livingston, Inc., Marshall, Mich.
- Metzner Stove Repair Co., Kansas City, Mo.
- Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
- National Foundry & Furnace Co., Dayton, Ohio.
- Northwestern Stove Repair Co., Chicago, Ill.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Peerless Foundry Co., Indianapolis, Ind.
- Peninsular Stove Co., Detroit, Mich.
- Pittsburgh Furnace Parts Co., Pittsburgh, Pa.
- Portland Stove Foundry Co., Portland, Maine.
- Pullen Stove & Furnace Repair Co., Geo. A., Denver, Colo.
- Shamblen Furnace Parts Co., Pittsburgh, Pa.
- Smith Furnace Co., New Castle, Pa.

RETNING EQUIPMENT AND MATERIALS

- Craftsman Plating & Tinning Co., Chicago, Ill.
- Ohmer Co., Geo. H., Dayton, Ohio.

RIDGE ROLL, SHEET METAL

- Alabama Metal Lath Co., Birmingham, Ala. (Steel)
- American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
- Barnes Metal Products Co., Chicago, Ill.
- Berger Bros. Co., Philadelphia, Pa.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- Inland Steel Products Co., Milwaukee, Wis. (Galv. & copper)
- Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
- Klauer Mfg. Co., Dubuque, Iowa.
- La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
- Lamb & Ritchie Co., Cambridge, Mass.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
- Newport Rolling Mill Co., Newport, Ky.
- Nichols Wire & Aluminum Co., Davenport, Iowa. (Aluminum)
- Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
- Plasteel Products Co., Washington, Pa.
- Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. steel)
- Reynolds Metals Co., Louisville, Ky. (Aluminum)
- Riggins Metal Products, Kankakee, Ill.
- St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
- Schoedinger, F. O., Columbus, Ohio. (Galv. & stainless steel, & copper)
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sioux Steel Co., Sioux City, S. D. (Galv. & copper)
- Southbridge Roofing Co., Inc., Southbridge, Mass.
- Southern Iron Co., E. E., St. Louis, Mo.
- Southern States Iron Roofing Co., Savannah, Ga.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- Tiffin Art Metal Co., Tiffin, Ohio. (Galv. copper, stainless steel, aluminum)
- United States Steel Co., Pittsburgh, Pa. (Galv. steel)
- Van Noorden Co., E., Boston, Mass.
- Wheeling Corrugating Co., Wheeling, W. Va. (Galv. steel)
- Wallace Co., William, Metalbestos Div., Belmont, Calif.

RIDGE VENTILATORS

See Ventilators, Roof

RIVETS

Alloy

- Bethlehem Steel Co., Bethlehem, Pa.
- Cherry Rivet Co., Los Angeles, Calif. (Blind)
- Clark Bros. Bolt Co., Milldale, Conn.
- Cooper Co., Clark, Palmyra, N. J.
- General Plate Div., Metals & Controls Corp., Attleboro, Mass. (Silver)
- Hassall, Inc., John, Brooklyn, N. Y.
- Huck Mfg. Co., Detroit, Mich. (Blind)
- Republic Steel Corp., Cleveland, Ohio.
- Townsend Co., New Brighton, Pa.
- Tubular Rivet & Stud Co., Wollaston, Mass.

Aluminum

- Aluminum Co., of America, Pittsburgh, Pa.
- Cherry Rivet Co., Los Angeles, Calif. (Blind)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Chicago Rivet & Machine Co., Bellwood, Ill.
 du Pont de Nemours & Co., Inc. E. I., Wilmington, Del. (Explosive)
 Goodrich Co., B. F., Akron, Ohio. (Blind)
 Hassall, Inc., John, Brooklyn, N. Y.
 Huck Mfg. Co., Detroit, Mich. (Blind)
 Reynolds Metals Co., Louisville, Ky.
 South Chester Corp., Philadelphia, Pa. (Blind)
 Tubular Rivet & Stud Co., Wollaston, Mass.

Brass or Copper

Chase Brass & Copper Co., Inc., Waterbury, Conn.
 Chicago Rivet & Machine Co., Bellwood, Ill.
 Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
 Cooper Co., Clark, Palmyra, N. J.
 du Pont de Nemours & Co., Inc. E. I., Wilmington, Del. (Explosive)
 Goodrich Co., B. F., Akron, Ohio. (Blind-Brass)
 Harper Co., H. M., Morton Grove, Ill.
 Hassall, Inc., John, Brooklyn, N. Y.
 Huck Mfg. Co., Detroit, Mich. (Blind)
 • Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
 Taunton & Co., Inc., John H., New York, N. Y.
 Townsend Co., New Brighton, Pa.
 Tubular Rivet & Stud Co., Wollaston, Mass.

Iron

Chicago Rivet & Machine Co., Bellwood, Ill.
 Cooper Co., Clark, Palmyra, N. J.
 Hassall, Inc., John, Brooklyn, N. Y.
 Townsend Co., New Brighton, Pa.

Steel

• Bethlehem Steel Co., Bethlehem, Pa.
 Chase Brass & Copper Co., Inc., Waterbury, Conn.
 Cherry Rivet Co., Los Angeles, Calif. (Blind)
 Chicago Rivet & Machine Co., Bellwood, Ill.
 Clark Bros. Bolt Co., Milldale, Conn.
 Cooper Co., Clark, Palmyra, N. J.
 Goodrich Co., B. F., Akron, Ohio.
 Hassall, Inc., John, Brooklyn, N. Y.
 Huck Mfg. Co., Detroit, Mich. (Blind)
 Republic Steel Corp., Cleveland, Ohio.
 Townsend Co., New Brighton, Pa.
 Tubular Rivet & Stud Co., Wollaston, Mass.

ROD, WELDING

Air Reduction Sales Co., New York, N. Y.
 All-State Welding Alloys Co., Inc., White Plains, N. Y.
 American Agile Corp., Cleveland, Ohio.
 American Brass Co., Waterbury, Conn.
 American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
 Arcos Corp., Philadelphia, Pa. (Stainless steel)
 Bridgeport Brass Co., Bridgeport, Conn.
 Chase Brass & Copper Co., Inc., Waterbury, Conn.
 Crucible Steel Co. of America, New York, N. Y. (Stainless steel)
 Dow Chemical Co., Midland, Mich. (Magnesium)
 Eutectic Welding Alloys Corp., New York, N. Y.
 Hobart Bros. Co., Troy, Ohio.
 International Nickel Co., Inc., New York, N. Y. (Monel & inconel)
 Linde Air Products Co., New York, N. Y.
 Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
 Marquette Mfg. Co., Inc., Minneapolis, Minn.
 Modern Engineering Co., St. Louis, Mo.
 National Cylinder Gas Co., Chicago, Ill.
 Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
 • Revere Copper & Brass Inc., New York, N.Y.
 Sight Feed Generator Co., West Alexandria, Ohio.
 Youngstown Sheet & Tube Co., Youngstown, Ohio.

ROOF CEMENT

See Cement, Roof

ROOFING, BUILT-UP

See Felt, Roofing

ROOFING, SHEET METAL

Aluminum

Aluminum Co., of America, Pittsburgh, Pa.
 Cheney Flashing Co., Trenton, N. J.
 Fingles Co., Baltimore, Md.
 Kaiser Aluminum & Chemical Corp., Oakland, Calif.

New Holland Metals Co., Div. of New Holland Machine Co., Mountville, Pa.
 Nichols Wire & Aluminum Co., Davenport, Iowa.
 Overly Mfg. Co., Greensburg, Pa.
 Reynolds Metals Co., Louisville, Ky.
 Southern States Iron Roofing Co., Savannah, Ga.
 Tiffin Art Metal Co., Tiffin, Ohio.

Copper

American Brass Co., Waterbury, Conn.
 Braden Mfg. Co., Terre Haute, Ind.
 Bridgeport Brass Co., Bridgeport, Conn.
 Chase Brass & Copper Co., Inc., Waterbury, Conn.
 Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
 Edwards Mfg. Co., Cincinnati, Ohio.
 Fingles Co., Baltimore, Md.
 • Hussey & Co., C. G., Pittsburgh, Pa.
 Klauer Mfg. Co., Dubuque, Iowa.
 Overly Mfg. Co., Greensburg, Pa.
 Perkinson & Brown, Chicago, Ill.
 • Revere Copper & Brass Inc., New York, N.Y.

Lead

Alpha Metals, Inc., Brooklyn, N. Y.
 • Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
 Flemm Lead Co., Inc., Long Island City, N. Y.
 Illinois Zinc Co., Chicago, Ill.
 Kirk & Son, Morris P., Los Angeles, Calif. (copper, galv. iron)
 National Lead Co., New York, N. Y.
 Northwest Lead Co., Seattle, Wash.
 Standard Rolling Mills, Inc., Brooklyn, N. Y.

Monel

Fingles Co., Baltimore, Md.
 International Nickel Co., Inc., New York, N. Y.
 Overly Mfg. Co., Greensburg, Pa.

Steel, Galvanized

Airtherm Mfg. Co., St. Louis, Mo.
 • Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
 American Steel Band Co., Pittsburgh, Pa.
 American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
 Apollo Steel Co., Apollo, Pa.
 Armco Steel Corp., Middletown, Ohio.
 Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
 • Bethlehem Steel Co., Bethlehem, Pa.
 Braden Mfg. Co., Terre Haute, Ind.
 Cheney Flashing Co., Trenton, N. J. (Corrugated)
 Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
 • Continental Steel Corp., Kokomo, Ind.
 Detroit Steel Products Co., Detroit, Mich.
 Edwards Mfg. Co., Inc., Cincinnati, Ohio.
 Fingles Co., Baltimore, Md.
 Goldsmith Metal Lath Co., Cincinnati, Ohio.
 Granite City Steel Co., Granite City, Ill. (Corrugated)
 Inland Steel Co., Chicago, Ill.
 • Inland Steel Products Co., Milwaukee, Wis.
 International Steel Co., Evansville, Ind.
 Klauer Mfg. Co., Dubuque, Iowa.
 La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
 Lyon, Conklin & Co., Inc., Baltimore, Md.
 New Delphos Mfg. Co., Delphos, Ohio.
 Newport Steel Corp., Newport, Ky.
 Overly Mfg. Co., Greensburg, Pa.
 Perkinson & Brown, Chicago, Ill.
 Plasteel Products Co., Washington, Pa. (Protected)
 Reeves Steel & Mfg. Co., Dover, Ohio.
 Robertson Co., H. H., Pittsburgh, Pa. (Protected)
 Sioux Steel Co., Sioux Falls, S. D.
 St. Paul Corrugating Co., St. Paul, Minn.
 Souther Iron Co., E. E., St. Louis, Mo.
 Southern States Iron Roofing Co., Savannah, Ga.
 Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
 Tiffin Art Metal Co., Tiffin, Ohio.
 Truscon Steel Co., Youngstown, Ohio. (Plain steel)
 • United States Steel Co., Pittsburgh, Pa.
 Wheeling Corrugating Co., Wheeling, W. Va.
 Wheeling Steel Corp., Wheeling, W. Va.

Steel, Protective Coated

American Steel Band Co., Pittsburgh, Pa.
 Airtherm Mfg. Co., St. Louis, Mo.
 Cheney Flashing Co., Trenton, N. J.
 Fingles Co., Baltimore, Md.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Steel, Tensile Plate

- Ajax Furnace Fitting Co. Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Fingles Co., Baltimore, Md.
- Follansbee Steel Corp., Pittsburgh, Pa.
- Inland Steel Products Co., Milwaukee, Wis.
- Klauer Mfg. Co., Dubuque, Iowa.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- New Delphos Mfg. Co., Delphos, Ohio.
- Sioux Steel Co., Sioux Falls, S. D.
- United States Steel Co., Pittsburgh, Pa.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Metal & Mfg. Co., Moundsville, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Tin Plate

- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Inland Steel Products Co., Milwaukee, Wis.
- Klauer Mfg. Co., Dubuque, Iowa.
- Lyon, Conklin & Co., Inc., Baltimore, Md.
- Perkinson & Brown, Chicago, Ill.
- Sioux Steel Co., Sioux Falls, S. D.
- United States Steel Co., Pittsburgh, Pa.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.

Zinc

- Barnes Metal Products Co., Chicago, Ill.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Illinois Zinc Co., Chicago, Ill.
- Matthiessen & Hegeler Zinc Co., La Salle, Ill.
- New Jersey Zinc Co., New York, N. Y.
- Potts-Farrington Co., Philadelphia, Pa.

ROOFING, SLATE

- North Bangor Slate Co., Bangor, Pa.
- Perkinson & Brown, Chicago, Ill.
- Sheldon Slate Products Co., Inc., Middle Granville, N. Y.
- Structural Slate Co., Pen Argyl, Pa.
- Vendor Slate Co., Inc., Nazareth, Pa.
- Vermont Structural Slate Co., Inc., Fair Haven, Vt.

ROOFING, TILE (CLAY AND CONCRETE)

- Hood Co., B. Mifflin, Daisy, Tenn. (Clay)
- Ludowici-Celadon Co., Chicago, Ill.
- Perkinson & Brown, Chicago, Ill.
- Truscon Laboratories, Detroit, Mich.
- United States Gypsum Co., Chicago, Ill. (Gypsum)

ROOF TRIM (MOULDINGS), STEEL, EAVES AND RAKES

- Alabama Metal Lath Co., Birmingham, Ala.
- Appleton Supply Co., Inc., Appleton, Wis. (Starter strip)
- Inland Steel Products Co., Milwaukee, Wis. (Eaves)
- Northwest Metal Products, Inc., Seattle, Wash.
- Obodye, Inc., B. P., Philadelphia, Pa.
- Penn Supply & Metal Corp., Philadelphia, Pa.
- Reynolds Metals Co., Louisville, Ky. (Aluminum)
- Sioux Steel Co., Sioux Falls, S. D.
- Wheeling Steel Corp., Wheeling, W. Va.

RULES, SLIDE, HEATING

- Calculator Specialty Co., Chicago, Ill.
- Climatemaker Slide Rule Service Co., Bloomington, Ill.
- Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
- Perry Graf Corp., Maywood, Ill.

RUST PROTECTION FOR METALS

See Chemicals, Rust Preventive

SANDERS

See Buffers, Grinders, Polishers and Sanders

SAVERS, HEAT

- Autogas Co., Chicago, Ill.
- Cary Mfg. Co., Waupaca, Wis.
- Elmwood Mfg. Co., Detroit, Mich.

- Gerhardt, W. F., Richmond, Va. (oil or gas)
- Hestriever Div., Crane Equipment & Supply Co., Waterbury, Conn.
- Rayfield Co., C. L., Chicago, Ill.

SCREENS, SUN REFLECTING

- Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
- Kaiser Aluminum & Chemical Corp., Oakland, Calif.

SCREWS, SHEET METAL

- All Metal Screw Products Co., Inc., New York, N. Y.
- Aluminum Co. of America, Pittsburgh, Pa.
- American Screw Co., Willimantic, Conn.
- Continental Screw Co., New Bedford, Mass.
- Elco Tool & Screw Corp., Rockford, Ill.
- Independent Nail & Packing Co., Bridgewater, Mass.
- Industrial Screw Co., Chicago, Ill.
- National Lock Co., Inc., Rockford, Ill.
- Parker-Kalon Corp., New York, N. Y.
- Pheoff Mfg. Co., Chicago, Ill.
- Rockford Screw Products Co., Rockford, Ill.
- Shakeproof, Inc., Chicago, Ill.
- United States Register Co., Battle Creek, Mich.

SEALS FOR REGISTERS

- Excel Heating & Air Conditioning Co., Chicago, Ill.

SEAMER MACHINES

See Machines, Seaming

SETTING DOWN MACHINES

See Machines, Setting Down

SHEARS AND PUNCHES COMBINED

See Punches and Shears Combined

SHEARS, HAND AND BENCH

See Snips and Shears, Bench and Hand

SHEETS, METAL

Aluminum

- Aluminum Co. of America, Pittsburgh, Pa.
- American Nickeloid Co., Peru, Ill.
- Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
- Fairmont Aluminum Co., Fairmont, W. Va.
- Kaiser Aluminum & Chemical Corp., Oakland, Calif.
- New Holland Metals Co., Div. New Holland Machine Co., Mountville, Pa.
- Philadelphia Rust Proof Co., Philadelphia, Pa.
- Revere Copper & Brass Inc., New York, N. Y. (Coiled sheets)
- Reynolds Metals Co., Louisville, Ky. (Corrugated)

Clad

- Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
- Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
- American Nickeloid Co., Peru, Ill. (Nickel, chromium, brass & copper)
- General Plate, Div. Metals & Controls Corp., Attleboro, Mass.
- Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
- Jessop Steel Co., Washington, Pa. (Stainless)
- Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
- Lukens Steel Co., Coatesville, Pa. (Nickel, Monel, Inconel & stainless steel)
- Sherman & Co., Flushing, N. Y. (Silver brazing alloys clad on non-ferrous metals)
- Wood Steel Co., Alan, Conshohocken, Pa. (Stainless steel)

Copper

- American Brass Co., Waterbury, Conn.
- American Nickeloid Co., Peru, Ill.
- Bridgeport Brass Co., Bridgeport, Conn.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
- Hussey & Co., C. G., Pittsburgh, Pa.
- Revere Copper & Brass Inc., New York, N. Y.
- Weirton Steel Co., Weirton, W. Va. (Electrolytic Zinc Coated)
- Western Brass Mills Div. Olin Industries, Inc., East Alton, Ill.

Copper, Lead Coated

- American Brass Co., Waterbury, Conn.
- Bridgeport Brass Co., Bridgeport, Conn.
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Hussey & Co., C. G., Pittsburgh, Pa.
- Lamb & Ritchie Co., Cambridge, Mass.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Ledcote Products Co., Long Island City, N. Y.
- Revere Copper & Brass Inc., New York, N. Y.

Lead

- Alpha Metals, Inc., Brooklyn, N. Y.
- Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
- Division Lead Co., Chicago, Ill.
- Eagle-Picher Co., Cincinnati, Ohio.
- Federated Metals Div., American Smelting & Refining Co., New York, N. Y.
- Flemm Lead Co., Inc., Long Island City, N. Y.
- Glaser Lead Co., Inc., Brooklyn, N. Y.
- Illinois Zinc Co., Chicago, Ill.
- Kirk & Son, Morris, Pa., Los Angeles, Calif.
- National Lead Co., New York, N. Y.
- Northwest Lead Co., Seattle, Wash.
- Standard Rolling Mills, Inc., Brooklyn, N. Y.
- Weirton Steel Co., Weirton, W. Va. (Alloy coated)

Steel, Aluminum Coated

- Armco Steel Corp., Middletown, Ohio.

Steel, Black

- Bethlehem Steel Co., Bethlehem, Pa.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Continental Steel Corp., Kokomo, Ind.
- Follansbee Steel Corp., Pittsburgh, Pa.
- Jones & Laughlin Steel Corp., Pittsburgh, Pa.
- Newport Steel Corp., Newport, Ky.
- Niles Rolling Mill Co., Niles, Ohio.
- Reeves Steel & Mfg. Co., Dover, Ohio.
- Wheeling Steel Corp., Wheeling, W. Va.
- Wood Steel Co., Alan, Conshohocken, Pa.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Blue, Polished

- Follansbee Steel Corp., Pittsburgh, Pa.
- Granite City Steel Co., Granite City, Ill.

Steel, Copper Bearing

- Armco Steel Corp., Middletown, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Continental Steel Corp., Kokomo, Ind.
- Follansbee Steel Corp., Pittsburgh, Pa.
- Granite City Steel Co., Granite City, Ill.
- Inland Steel Co., Chicago, Ill. (Copper alloy & zinc alloy)
- Jones & Laughlin Steel Corp., Pittsburgh, Pa.
- Newport Steel Corp., Newport, Ky.
- Niles Rolling Mill Co., Niles, Ohio.
- Reeves Steel & Mfg. Co., Dover, Ohio.
- Republic Steel Corp., Cleveland, Ohio.
- Sharon Steel Co., Sharon, Pa.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- United States Steel Co., Pittsburgh, Pa.
- Weirton Steel Co., Weirton, W. Va.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Corrugated

- Armco Steel Corp., Middletown, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv.)
- Bethlehem Steel Co., Bethlehem, Pa. (Galv.)
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif. (Galv.)
- Jones & Laughlin Steel Corp., Pittsburgh, Pa. (Black)
- New Delphos Mfg. Co., Delphos, Ohio. (Galv.)
- Newport Steel Corp., Newport, Ky. (Galv. & black)
- Niles Rolling Mill Co., Niles, Ohio.
- Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. & black)
- United States Steel Co., Pittsburgh, Pa. (Galv. & black)
- Weirton Steel Co., Weirton, W. Va. (Galv.)
- Wheeling Corrugating Co., Wheeling, W. Va. (Galv.)

Steel, Galvanized

- Armco Steel Corp., Middletown, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Continental Steel Corp., Kokomo, Ind.
- Inland Steel Co., Chicago, Ill.
- New Delphos Mfg. Co., Delphos, Ohio.
- Newport Steel Corp., Newport, Ky.
- Niles Rolling Mill Co., Niles, Ohio.

- Reeves Steel & Mfg. Co., Dover, Ohio.
- Republic Steel Corp., Cleveland, Ohio.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- United States Steel Co., Pittsburgh, Pa.
- Weirton Steel Co., Weirton, W. Va.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.

Steel, Galvannealed

- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
- Continental Steel Corp., Kokomo, Ind.
- Newport Rolling Mill Co., Andrews Steel Co., Newport, Ky.
- Newport Steel Corp., Newport, Ky.
- Niles Rolling Mill Co., Niles, Ohio.
- Republic Steel Corp., Cleveland, Ohio.
- Sharon Steel Corp., Sharon, Pa.
- United States Steel Co., Pittsburgh, Pa.

Steel, Protective Coated

- American Steel Band Co., Pittsburgh, Pa.
- Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain)
- Plasteel Products Co., Washington, Pa.
- Wheeling Corrugating Co., Wheeling, W. Va.

Steel, Stainless

- Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
- Armco Steel Corp., Middletown, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Crucible Steel Co. of America, New York, N. Y.
- Eastern Stainless Steel Corp., Baltimore, Md.
- Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
- Jessop Steel Co., Washington, Pa.
- Republic Steel Corp., Cleveland, Ohio.
- Sharon Steel Corp., Sharon, Pa.
- Superior Steel Corp., Pittsburgh, Pa.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- United States Steel Co., Pittsburgh, Pa.
- Universal-Cyclops Steel Corp., Bridgeville, Pa.
- Washington Steel Corp., Washington, Pa.

Steel, Tarn Plate

- Armco Steel Corp., Middletown, Ohio.
- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Follansbee Steel Corp., Pittsburgh, Pa.
- Newport Steel Corp., Newport, Ky.
- Niles Rolling Mill Co., Niles, Ohio.
- United States Steel Co., Pittsburgh, Pa.
- Weirton Steel Co., Weirton, W. Va.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Tin Plate

- Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
- Bethlehem Steel Co., Bethlehem, Pa.
- Granite City Steel Co., Granite City, Ill.
- Inland Steel Co., Chicago, Ill.
- Jones & Laughlin Steel Corp., Pittsburgh, Pa.
- Republic Steel Corp., Cleveland, Ohio.
- Sharon Steel Corp., Sharon, Pa.
- United States Steel Co., Pittsburgh, Pa.
- Weirton Steel Co., Weirton, W. Va.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wheeling Steel Corp., Wheeling, W. Va.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.

Zinc

- American Nickeloid Co., Peru, Ill.
- Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
- Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
- Hegeler Zinc Co., Danville, Ill.
- Illinois Zinc Co., Chicago, Ill.
- Matthiessen & Hegeler Zinc Co., La Salle, Ill.
- New Jersey Zinc Co., New York, N. Y.
- Potts-Farrington Co., Philadelphia, Pa.

SHEETS, NON-METALLIC

- Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos cement).
- Carey Mfg. Co., Phillip, Cincinnati, Ohio. (Asbestos cement)
- Celotex Corp., Chicago, Ill.
- du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Plastics & coated fabrics)
- Johns-Manville, New York, N. Y. (Asbestos cement)
- Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
- Keystone Asphalt Products Co., Chicago, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Masonite Corp., Chicago, Ill.
 Norristown Magnesia & Asbestos Co., Norristown, Pa. (Asbestos)
 Ruberoid Co., New York, N. Y. (Asbestos cement; flat & corrugated)
 Sall Mountain Co., Chicago, Ill.
 • Wilson, Inc., Grant, Chicago, Ill. (Asbestos)

SHEETS, SPECIAL METAL

(Nickel Zinc, Chrome Zinc, Nickel Coated Copper, Chromium Coated Copper, Nickel Coated Steel, Chromium Coated Steel, Chromium Coated Nickel Silver, Zinc Brass, Zinc Copper, etc.)

- Allan Corp., Trenton, N. J. (Zinc, copper, & magnesium alloy)
 American Brass Co., Waterbury, Conn. (Copper-silicon alloys)
 American Nickeloid Co., Peru, Ill. (Nickel, chromium, brass & copper plated zinc)
 Apollo Metal Works Chicago, Ill. (Plated—Nickel Zinc, Nickel Copper, Chrome Copper, Chrome Steel, Nickel Steel, Zinc Steel, Chrome Brass)
 Apollo Steel Co., Apollo, Pa.
 • Bethlehem Steel Co., Bethlehem, Pa. (Nickel—Chromium)
 Cheney Flashing Co., Trenton, N. J. (Copper-zinc alloy)
 Dow Chemical Co., Midland, Mich.
 Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
 International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
 Lukens Steel Co., Coatesville, Pa. (Monel & Inconel)
 Maysteel Products, Inc., Milwaukee, Wis.
 National Sheet Metal Co., Peru, Ill. (Electro-Plated)
 • Revere Copper & Brass Inc., New York, N. Y. (Copper alloys)
 Robertson Co., H. H., Pittsburgh, Pa. (Protected)
 Western Brass Mills Div. Olin Industries, Inc., East Alton, Ill. (Brass, bronze, phosphor bronze)

SHIELDS, WARM AIR REGISTER

- Gammeter Co., W. F., Cadiz, Ohio. (With Humidifier)
 Kauffman Air Conditioning Corp., St. Louis, Mo.
 Patent Novelty Co., Fulton, Ill. (With humidifier).
 Savage Co. W. J., Knoxville, Tenn.

SHINGLES AND TILE, METAL

- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
 Berger Mfg. Div., Republic Steel Corp., Canton, Ohio. (Galv.)
 Edwards Mfg. Co., Inc., Cincinnati, Ohio. (Galv. steel, tin, zinc, aluminum & copper)
 Fingles Co., Baltimore, Md. (All metals)
 • Miller & Doing, Brooklyn, N. Y.
 Reynolds Metals Co., Louisville, Ky. (Aluminum)
 Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Galv. & copper)
 Southern States Iron Roofing Co., Savannah, Ga. (Steel & aluminum)
 Wheeling Corrugating Co., Wheeling, W. Va. (Steel shingles)
 • Wallace Co., William, Metalbestos Div., Belmont, Calif. (Painted tin and galv.)

SHUTTERS

See Louvers and Shutters

SKYLIGHT LIFTS

See Lifts, Skylight

SKYLIGHTS

- Acme Mfg. Co., Philadelphia, Pa.
 • Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
 Biersach & Niedermeyer Co., Milwaukee, Wis.
 Danzer Metal Works Co., Hagerstown, Md.
 Edwards Mfg. Co., Inc., Cincinnati, Ohio.
 Fingles Co., Baltimore, Md.
 Gehri Co., Tacoma, Wash.
 General Sheet Metal Works, Inc., Bridgeport, Conn. (Puttyless)
 Herbert & Sons, R. D., Nashville, Tenn.
 Hirschman-Pohle Co., Inc., LeRoy, N. Y. (Puttyless)
 LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
 Lee & Son Co., Thomas, Cincinnati, Ohio.
 Moeschl-Edwards Corrugating Co., Inc., Cincinnati, Ohio.
 Overly Mfg. Co., Greensburg, Pa.
 Pennsylvania Wire Glass Co., Philadelphia, Pa.
 Perkinson & Brown, Chicago, Ill.
 Riester & Thesmacher Co., Cleveland, Ohio.

- Riggin Metal Products, Kankakee, Ill.
 Robertson Co., H. H., Pittsburgh, Pa. (Structural)
 St. Paul Corrugating Co., St. Paul, Minn.
 Schoedinger, F. O., Columbus, Ohio.
 Sioux Steel Co., Sioux Falls, S. D.
 Southbridge Roofing Co., Inc., Southbridge, Mass.
 Souther Iron Co., E. E., St. Louis, Mo.
 Steinhurst & Sons, Inc., Emil, Utica, N. Y.
 Tiffin Art Metal Co., Tiffin, Ohio.
 Vallas, Lionel, Chicago, Ill.
 Van Noorden Co., E., Boston, Mass.
 Vent-O-Lite Co., Chicago, Ill. (Puttyless)
 • Willis Steel Corp., Galesburg, Ill.
 York Corrugating Co., York, Pa.

SLITTING MACHINES

See Machines, Slitting

SMOKE PIPE

See Pipe, Smoke

SNIPS AND SHEARS, BENCH AND HAND

- Bartlett Mfg. Co., Detroit, Mich.
 • Bridge Shear Co., Sturgis, Mich. (Hand)
 • Beverly Shear Mfg. Co., Chicago, Ill.
 Bremil Mfg. Co., Erie, Pa. (Shears)
 Compton Shear Co., W. H., Newark, N. J.
 • Crescent Tool Co., Jamestown, N. Y.
 Henkel-Clauss Co., Fremont, Ohio. (Hand)
 Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
 Klenk's Aviation Snips, Wilmington, Del.
 Lincoln Machine Co., Boston, Mass.
 • Niagara Machine & Tool Works, Buffalo, N. Y.
 O'Neil-Irwin Mfg. Co., Lake City, Minn.
 • Peck, Stow & Wilcox Co., Southington, Conn.
 Penn Tool Co., Philadelphia, Pa.
 Roto-Table Co., Dayton, Ohio. (Double cutting, notching, nibbling & dovetailing)
 Snap-On Tools Corp., Kenosha, Wis.
 Viking Shear Co., Erie, Pa. (Shears)
 • Whitney Mfg. Co., W. A., Rockford, Ill.
 Wiss & Sons Co., J., Newark, N. J.

SNOW GUARDS

See Guards, Snow

SOLDER

- Allen Co., Inc., L. B., Chicago, Ill. (Acid & rosin core, bar, wire, powder, stainless steel)
 All-State Welding Alloys Co., Inc., White Plains, N. Y.
 Alpha Metals, Inc., Brooklyn, N. Y. (Silver & tin-lead)
 American Brass Co., Waterbury, Conn.
 American Products Corp., Chicago, Ill. (Silver)
 American Solder & Flux Co., Philadelphia, Pa. (paste)
 Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
 Chase Brass & Copper Co., Inc., Waterbury, Conn.
 Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
 Division Lead Co., Chicago, Ill.
 Downs-Smith Brass & Copper Co., New York, N. Y.
 Eagle-Picher Co., Cincinnati, Ohio. (Bar & Wire)
 Empire Metal Co., Syracuse, N. Y.
 Farrellov Co., Philadelphia, Pa.
 • Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
 Flemm Lead Co., Inc., Long Island City, N. Y.
 Fusion Engineering, Cleveland, Ohio.
 Glaser Lead Co., Inc., Brooklyn, N. Y.
 Handy & Harman, New York, N. Y. (Silver)
 Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
 Kester Solder Co., Chicago, Ill. (Bar, cored, self-fluxing wire)
 Kirk & Son, Morris P., Los Angeles, Calif.
 Klauer Mfg. Co., Dubuque, Iowa.
 Lenk Mfg. Co., Boston, Mass. (Rosin core, acid core, wire, aluminum)
 Lukens Metal Co., Thos. F., Philadelphia, Pa.
 National Lead Co., New York, N. Y.
 Northwest Lead Co., Seattle, Wash.
 Ohmer Co., Geo. H., Dayton, Ohio.
 Ruby Chemical Co., Columbus, Ohio. (Acid & rosin core)
 Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
 Sherman & Co., Flushing, N. Y. (Silver)
 Standard Rolling Mills, Inc., Brooklyn, N. Y.
 Technical Processes Division, Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
 United Wire & Supply Corp., Providence, R. I.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

SOLDERING COPPERS

See Coppers, Soldering

SOLDERING FLUX

See Flux, Soldering

SOLDERING FURNACES

See Furnaces, Soldering

SOLDERING TORCHES

See Torches, Soldering

SOLENOID VALVES

See Controls

SOOT REMOVER

- Ampion Corp., Long Island City, N. Y.
- Miller Products Co., Lansing, Mich.
- Coughlan Co., G. N., West Orange, N. J.
- Healy-Ruff Co., St. Paul, Minn.
- Hercules Chemical Co., Inc., New York, N. Y.
- Marine Electrolysis Eliminator Co., Seattle, Wash.
- Metropolitan Refining Co., Inc., Long Island City, N. Y.
- North American Mogul Products Co., Cleveland, Ohio.
- Red Wing Oil Burner Co., Inc., Chelsea, Mass.
- S.O.S. Products Co., Inc., Brooklyn, N. Y.
- Tamm Industries Inc., Chicago, Ill.

SPOT WELDERS

See Welders, Spot

SPRAY GUNS

See Guns, Spray

STAMPINGS, METAL

- Ackermann Mfg. Co., Wheeling, W. Va.
- Acme Mfg. Co., Philadelphia, Pa.
- Ames Co., W. R., San Francisco, Calif.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Bossett Co., Inc., Utica, N. Y.
- Burgess-Norton Mfg. Co., Geneva, Ill.
- Campbell Stainless Products Co., Washington, Pa. (Stainless steel letters)
- Chase Brass & Copper Co., Inc., Waterbury, Conn.
- Chicago Metal Mfg. Co., Chicago, Ill. (Rings)
- Commercial Shearing & Stamping Co., Youngstown, Ohio.
- Dahlstrom Metallic Door Co., Jamestown, N. Y.
- Dayton Rogers Mfg. Co., Minneapolis, Minn.
- Detroit Stamping Co., Detroit, Mich.
- Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Friedley-Voshardt Co., Chicago, Ill.
- Globe Machine & Stamping Co., Cleveland, Ohio.
- H. P. L. Mfg. Co., Cleveland, Ohio.
- Hupp Corp., Globe Stamping Div., Cleveland, Ohio.
- Ideal Products Co., Oshkosh, Wis.
- Kirk & Blum Mfg. Co., Cincinnati, Ohio.
- Ledcote Products Co., Long Island City, N. Y.
- Lukens Steel Co., Coatesville, Pa.
- Maysteel Products, Inc., Milwaukee, Wis.
- Mechanical Products Co., Seattle, Wash.
- Miller & Doing, Brooklyn, N. Y.
- Morrison Products Inc., Cleveland, Ohio.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Moss Industries, Inc., Brooklyn, N. Y.
- National Metal Fabricators, Chicago, Ill.
- New Delphos Mfg. Co., Delphos, Ohio.
- New Monarch Machine & Stamping Co., Des Moines, Iowa.
- Northwest Metal Products, Inc., Seattle, Wash.
- Paine Co., Chicago, Ill.
- Revere Copper & Brass Inc., New York, N. Y. (Copper & copper alloy)
- Small Lot Stamping Co., Linden, N. J.
- Standard Pressed Steel Co., Jenkintown, Pa.
- Standard Stamping & Perforating Co., Chicago, Ill.
- Tannewitz Works, Grand Rapids, Mich.
- Truscon Steel Co., Youngstown, Ohio.
- United States Register Co., Battle Creek, Mich.
- Western Brass Mills Div. Olin Industries, Inc., East Alton, Ill.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Worcester Pressed Steel Co., Worcester, Mass.
- York Corrugating Co., York, Pa.
- Youngstown Sheet & Tube Co., Youngstown, Ohio.
- Ziegler-Harris Co., Burbank, Calif.

STAMPINGS, STEEL FURNACE

Ackermann Mfg. Co., Wheeling, W. Va.
Commercial Shearing & Stamping Co., Youngstown, Ohio. (Heads for furnace domes & crescent radiators)
Mohawk Metal Products Co., Frankfort, N. Y. (Furnace shells and radiators)

STERILIZERS, AIR

See Lamps, Germicidal; Blower-Filter Units
Equipped With Germicidal Apparatus

STOKER CONTROLS

See Controls; Control Systems

STOKERS

Domestic (Up to 61 lb per hour)

- Airtemp Div., Chrysler Corp., Dayton, Ohio. (Anthracite, bituminous)
- Allen Stoker Co., Allentown, Pa. (Anthracite)
- American Furnace Co., St. Louis, Mo.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Auburn Burner Co., Auburn, Ind.
- Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
- Automatic Firing Corp., St. Louis, Mo.
- Black Diamond Stoker Co., Sioux City, Iowa.
- Canton Stoker Corp., Canton, Ohio.
- Carpenter Heating & Stoker Co., Cleveland, Ohio.
- Catskill Metal Works, Inc., Catskill, N. Y. (Anthracite)
- Central Rubber & Steel Corp., Findlay, Ohio.
- Conco Engineering Works, Mendota, Ill.
- Consolidated Industries, Inc., Lafayette, Ind.
- Cooper & Cooper, Inc., Pittsfield, Mass. (Anthracite).
- Cotta Transmission Co., Rockford, Ill.
- Crane Co., Chicago, Ill.
- Delco Appliance Div., General Motors Corp., Rochester, N. Y.
- Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
- Diamond Iron Works, Inc., Minneapolis, Minn.
- Eddy Stoker Corp., Chicago, Ill.
- Electric Furnace-Man, Inc., Emmaus, Pa.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fairbanks, Morse & Co., Chicago, Ill.
- Frederick Iron & Steel, Inc., Frederick, Md.
- Freed Heater & Stoker Co., Philadelphia, Pa. (Anthracite)
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Fuel Savers, Inc., Harrisburg, Pa.
- Gehl Bros. Mfg. Co., West Bend, Wis.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Heating Assurance, Inc., Spokane, Wash.
- Hemp & Co., Inc., Macomb, Ill.
- Hershey Machine & Foundry Co., Manheim, Pa.
- Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
- Illinois Iron & Bolt Co., Chicago, Ill.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Keith Furnace Co., Des Moines, Iowa.
- Kingston Products Corp., Tipton, Ind.
- Kol-Master Corp., Oregon, Ill.
- Leas Co., H. Leslie, Monona, Iowa.
- Meyer Furnace Co., Peoria, Ill.
- Muncie Gear Works, Inc., Muncie, Ind.
- National Steam Pump Co., Upper Sandusky, Ohio.
- National Stoker Co., Inc., St. Louis, Mo. (Bituminous)
- Nelson Bros. & Strom Co., Racine, Wis. (Bituminous)
- Northern Steel & Stoker Corp., Peoria, Ill.
- Plymouth Industries, Inc., Plymouth, Ind.
- Pocahontas Fuel Co., Inc., Stoker Div., Cleveland, Ohio.
- Premium Coal & Oil Co., Cincinnati, Ohio.
- Quick Furnace & Supply Co., Des Moines, Iowa.
- Schwab Furnace Co., Milwaukee, Wis.
- Schwab Safe Co., Lafayette, Ind.
- Souther Iron Co., E. E., St. Louis, Mo.
- Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
- Stoker-Lad Co., Tacoma, Wash.
- Stoker-Ola Mfg. Co., Peoria, Ill.
- Stokol Stoker Co., Inc., Dayton, Ohio.
- Sun-Fire Stoker Corp., New Albany, Ind.
- Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
- Tropic-Air Stoker Co., Canton, Ohio.
- U. S. Machine Corp., Lebanon, Ind.
- Whiting Fire Power Products Corp., Superior, Wis.
- Will-Burt Co., Orrville, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Industrial and Commercial (41 lb to 300 lb per hour)

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Coal Burner Co., Chicago, Ill.
- Anchor Div., Stratton & Terstege Co., New Albany, Ind.
- Auburn Burner Co., Auburn, Ind.
- Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
- Automatic Firing Corp., St. Louis, Mo.
- Black Diamond Stoker Co., Sioux City, Iowa.
- Bros Boiler & Mfg. Co., Wm., Minneapolis, Minn.
- Brownell Co., Dayton, Ohio.
- Canton Stoker Corp., Canton, Ohio.
- Carpenter Heating & Stoker Co., Cleveland, Ohio.
- Catskill Metal Works, Inc., Catskill, N. Y. (Anthracite).
- Central Rubber & Steel Corp., Findlay, Ohio.
- Chicago Automatic Stoker Co., Inc., Chicago, Ill.
- Conco Engineering Works, Mendota, Ill.
- Consolidated Industries, Inc., Lafayette, Ind.
- Cooper & Cooper, Inc., Pittsfield, Mass. (Anthracite).
- Cotta Transmission Co., Rockford, Ill.
- Crown Iron Works, Minneapolis, Minn.
- Detroit Stoker Co., Detroit, Mich.
- Diamond Castings Co., Johnsonburg, Pa.
- Diamond Iron Works, Inc., Minneapolis, Minn.
- Eddy Stoker Corp., Chicago, Ill.
- Electric Furnace-Man, Inc., Emmaus, Pa.
- Fairbanks, Morse & Co., Chicago, Ill.
- Flynn & Emrich Co., Baltimore, Md.
- Frederick Iron & Steel, Inc., Frederick, Md.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Fuel Savers, Inc., Harrisburg, Pa.
- Gehl Bros. Mfg. Co., West Bend, Wis.
- General Machinery Co., Spokane, Wash.
- Gross-Aire Mfg. Co., St. Louis, Mo.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Heating Assurance Inc., Spokane, Wash.
- Hemp & Co., Inc., Macomb, Ill.
- Hershey Machine & Foundry Co., Manheim, Pa.
- Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
- Illinois Iron & Bolt Co., Chicago, Ill.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Kingston Products Corp., Tipton, Ind.
- Kol-Master Corp., Oregon, Ill.
- Leas Co., H. Leslie, Monona, Iowa.
- Meyer Furnace Co., Peoria, Ill.
- Muncie Gear Works, Inc., Muncie, Ind.
- National Steam Pump Co., Upper Sandusky, Ohio.
- National Stoker Co., Inc., St. Louis, Mo. (Bit).
- Nelson Bros. & Strom Co., Racine, Wis. (Bit).
- Newcomb-Detroit Co., Detroit, Mich.
- Northern Steel & Stoker Corp., Peoria, Ill.
- Omaha Stove Repair Works, Inc., Omaha, Nebr.
- Ormsby-Osterman Co., St. Louis, Mo.
- Plymouth Industries, Inc., Plymouth, Ind.
- Pocahontas Fuel Co., Inc., Cleveland, Ohio.
- Premium Coal & Oil Co., Cincinnati, Ohio.
- Rosedale Foundry & Machinery Co., Pittsburgh, Pa.
- Schwab Furnace Co., Milwaukee, Wis.
- Schwab Safe Co., Lafayette, Ind.
- Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
- Stoker-Ola Mfg. Co., Peoria, Ill.
- Stokol Stoker Co., Inc., Dayton, Ohio.
- Sun-Fire Stoker Corp., New Albany, Ind.
- Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
- Tropic-Air Stoker Co., Canton, Ohio.
- U. S. Machine Corp., Lebanon, Ind.
- Westinghouse Electric Corp., Pittsburgh, Pa.
- Whiting Fire Power Products Corp., Superior, Wis.
- Whitty Co., Inc., Boston, Mass. (Bituminous)
- Will-Burt Co., Orrville, Ohio.
- Woolley Engineering Co., Detroit, Mich.

STOVES

See Heaters

SWITCHES, MAGNETIC, MANUAL, TIME

See Controls

TANKS, FUEL STORAGE

- Black, Sivalls & Bryson, Inc., Kansas City, Mo.
- Brenner & Co., Inc., Jacob, Fond du Lac, Wis.
- Kaustine Co., Inc., Perry, N.Y.
- Michigan Tank & Furnace Corp., Dearborn, Mich.

- Mohawk Metal Products Co., Inc., Frankfort, N. Y.
- Morrison Railway Supply Corp., Buffalo, N. Y.
- Rheem Mfg. Co., New York, N. Y.
- Siebring Mfg. Co., George, Iowa.
- Whitlock Mfg. Co., Hartford, Conn.

TANK GAUGES, FUEL OIL

See Gauges, Tank, Fuel Oil

TEES

See Angles, Bars, Beams, Channels, and Tees

TEMPERATURE CONTROLS

See Controls; Control Systems

TEMPERATURE RECORDERS

See Recorders, Temperature

THERMOMETERS, INDICATING

- Bacharach Industrial Instrument Co., Pittsburgh, Pa.
- Bailey Meter Co., Cleveland, Ohio.
- Bristol Co., Waterbury, Conn.
- Brown Instrument Co. Div. of Minneapolis-Honeywell Reg. Co., Philadelphia, Pa.
- Cooper Oven Thermometer Co., Pequabuck, Conn.
- Defender Instrument & Regulator Co., St. Louis, Mo.
- Fee & Stemwedel, Inc., Chicago, Ill.
- Foxboro Co., Foxboro, Mass.
- Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
- G. M. Mfg. Co., New York, N. Y.
- H-B Instrument Co., Philadelphia, Pa.
- Hill & Co., E. Vernon, Chicago, Ill. (Also Kata Thermometers)
- Illinois Testing Laboratories, Inc., Chicago, Ill.
- Leeds & Northrup Co., Philadelphia, Pa.
- Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
- Marsh Corp., Jas. P., Skokie, Ill.
- Marshalltown Mfg. Co., Marshalltown, Iowa.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Moeller Instrument Co., Richmond Hill, N. Y.
- Palmer Thermometers, Inc., Cincinnati, Ohio.
- Philadelphia Thermometer Co., Philadelphia, Pa.
- Powers Regulator Co., Chicago, Ill. (Dials)
- Precision Thermometer & Instrument Co., Philadelphia, Pa.
- Preferred Utilities Mfg. Corp., New York, N. Y.
- Rochester Mfg. Co., Inc., Rochester, N. Y. (Dials)
- Tagliabue Instruments Div. Weston Electrical Instrument Corp., Newark, N. J.
- Taylor Instrument Cos., Rochester, N. Y.
- United States Gauge Div., American Machine & Metals Inc., New York, N. Y.
- Wekler Thermometer Corp., New York, N. Y.
- Weston Electrical Instrument Corp., Newark, N. J.
- Wheelco Instruments Co., Chicago, Ill.

THERMOSTATS

See Controls

THROUGH WALL FLASHINGS

See Flashings, Through Wall

TIME SWITCHES

See Controls

TIMERS, WELDING

- Automatic Electric Mfg. Co., Mankato, Minn.
- Automatic Temperature Control Co., Inc., Philadelphia, Pa.
- Cutler-Hammer, Inc., Milwaukee, Wis.
- Electronic Products Co., St. Charles, Ill.
- Peer, Inc., Benton Harbor, Mich.
- Photoswitch, Inc., Cambridge, Mass.
- Sciaky Bros., Inc., Chicago, Ill.
- Westinghouse Electric Corp., Pittsburgh, Pa.

TINNING

See Baths, Tinning

TIPS, DAMPER

See Clips and Tips, Damper

• Advertisement in this issue. See Index to Advertisers, page 104-D.

TOOLS, ROOFERS'

- Adams Co., Dubuque, Iowa. (Scaffold brackets)
- Aeroil Products Co., Inc., South Hackensack, N. J. (Melting kettles, hoists, buckets & accessories)
- Ajax Building Bracket Co., Cleveland, Ohio. (Brackets)
- Belden Machine Co., New Haven, Conn. (Slater hammers, rippers & stakes)
- Conner Construction Co., Philadelphia, Pa. (Kettles)
- Eirmann Floor Scraper Co., York, Pa. (Roof scrapers)
- Frey & Co., Frank P., Chicago, Ill. (All kinds)
- Hauk Mfg. Co., Brooklyn, N. Y. (Kettles)
- Littleford Bros., Inc., Cincinnati, Ohio. (Roofing kettles)
- Matt Coil-Less Burner Co., Chicago, Ill.
- Mohawk Metal Products Co., Frankfort, N. Y. (Kettles)
- Moser & Son Mfg. Co., Bluffton, Ind. (Ladder jacks)
- Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Roof brackets & accessories)
- Niagara Machine & Tool Works, Buffalo, N. Y. (Double seamers)
- Owens-Corning Fiberglas Corp., Toledo, Ohio. (Fiberglas mop yarn)
- Peck, Stow & Wilcox Co., Southington, Conn. (Seamers, tongs, etc.)
- Rose Mfg. Co., Denver, Colo. (Ladder shoes)
- Southbridge Roofing Co., Inc., Southbridge, Mass. (Scrapers, spreaders, fire pots, buckets & kettles)
- Sperry & Co., D. R., Batavia, Ill. (Kettles)
- Stortz & Son, Inc., John, Philadelphia, Pa. (Tongs, seamers, scrapers, jointers, punches, hammers, rippers, stakes)
- Structural Slate Co., Pen Argyl, Pa. (Hammers, rippers, stakes, cutters, punches)

TOOLS, SHEET METAL WORKERS'

- Allen, H. D., Los Angeles, Calif. (Template center punches)
- Atkins & Co., E. C., Indianapolis, Ind. (Band saw & hack saw blades)
- Barth Mfg. Co., Milldale, Conn. (Hand rivet sets, groovers, punches, awls)
- Beall Pipe & Tank Corp., Portland, Ore. (Carrier for Sheets)
- Black & Decker Mfg. Co., Towson, Md. (Automatic screw driver, portable electric tapper)
- Bruno Tools, Beverly Hills, Calif. (Adjustable hole cutters & circle cutters)
- Carboloy Co., Inc., Detroit, Mich. (Concrete drill bits)
- Champion Tool Co., Los Angeles, Calif. (Pipe Crimper)
- Chicago Pneumatic Tool Co., New York, N. Y. (Rivet)
- Circo Tool Co., Milwaukee, Wis. (Hole cutters)
- Clemson Bros., Inc., Middletown, N. Y. (Hack Saws)
- Concrete Termite Drill Co., Pasadena, Calif. (Concrete drill bits)
- Crandall Mfg. Co., Los Angeles, Calif. (Drill Grinders)
- Crescent Tool Co., Jamestown, N. Y. (Scratch awls, pliers, screw drivers, wrenches)
- Damasus Steel Products Corp., Rockford, Ill. (Punches, chisels, star drills, rippers, etc.)
- Davis & Son Machine Works, Los Angeles, Calif. (Clip & button punch)
- Delta Mfg. Div., Rockwell Mfg. Co., Milwaukee, Wis.
- Downs-Smith Brass & Copper Co., Inc., New York, N. Y. (Hammers)
- Excelsior Tool and Machine Co., East St. Louis, Ill. (Sheet clamps)
- Fairmount Tool & Forging Co., Cleveland, Ohio. (Calking irons, file holders, pliers, solder paddle, chisels, punches, hammers)
- Fox Noiseless Hammer Co., Media, Pa. (Seaming hammer)
- Frayn Co., N. J., Redwood City, Calif. (Hole cutters)
- Gouran, Mark F., Inc., Philadelphia, Pa. (Welding fixtures)
- Haines Gauge Co., Inc., Philadelphia, Pa. (Thickness gauges)
- Handes Co., Bloomington, Ill. (Truck)
- Hanlan Co., Los Angeles, Calif. (Elec. appliance tester)
- Hub Specialty Co., Reading, Mass. (Awls)
- Interstate Sales Co., New York, N. Y. (Angle meters & center finders)
- Johnson, Inc., Wm., Newark, N. J. (Rivet sets)
- Johnson Ladder & Shoe Co., Eau Claire, Wis. (Ladder Shoes)
- Kennametal Inc., Latrobe, Pa. (Masonry & rock drill bits)
- Lapeer Mfg. Co., Detroit, Mich. (Vise wrench)
- Lufkin Rule Co., Saginaw, Mich. (Rules: tapes, flexible, circumference, etc.; center punches, scribes, etc.)
- Lyon Metal Products, Inc., Aurora, Ill. (Stock cart, tool stand, tool boxes & work benches)
- Machine Rebuilding Co., Detroit, Mich.
- Maplewood Machinery Co., Chicago, Ill. (Trammels, marking tools)
- Mehl Machinery, Houston, Texas. (Screw clamps)

- Merchandising & Mfg. Associates, Inc., Lancaster, Pa. (Rivet cutters & joggling blocks)
- Millers Falls Co., Greenfield, Mass. (Hack saw blades)
- Misener Mfg. Co., Inc., Syracuse, N. Y. (Hole saws)
- Morey, Dan, Los Angeles, Calif. (Hammers)
- Moser & Son Mfg. Co., Bufton, Ind. (Spouting tripods)
- Munton Mfg. Co., Franklin Park, Ill. (Hydraulic vises)
- Mutual Liquid Gas & Equipment Co., Inglewood, Calif. (Blow torch)
- Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Ladders, scaffolds & accessories)
- New England Carbide Tool Co., Cambridge, Mass. (Masonry drill bits)
- Niagara Machine & Tool Works, Buffalo, N. Y. (Stakes, hammers, groovers, hollow punches, etc.)
- Packham Crimper Co., Mechanicsburg, Ohio. (Crimping tongs)
- Peck, Stow & Wilcox Co., Southington, Conn. (Hammers, awls, rivet sets, groovers, etc.)
- Penn Tool Co., Philadelphia, Pa. (Punches, chisels & edge tools)
- Petersen Mfg. Co., Inc., DeWitt, Nebr. (Clamps)
- Phillips Drill Co., Chicago, Ill. (Anchor bolt drills)
- Pioneer Tool Co., Racine, Wis. (Adj. saw handle, pipe crimper, trammel points)
- Rapidesign, Inc., Glendale, Calif. (Templates)
- Rawplug Co., Inc., New York, N. Y. (Masonry drills)
- RCS Tool Sales Corp., Joliet, Ill. (All purpose power saw)
- R-D Sales Co., Flint, Mich. (Level & angle indicator)
- Reiner & Campbell Co., Inc., Newark, N. J. (Dividers & notchers)
- Roesch Tool Products, Los Angeles, Calif. (Crimper, clamps)
- Rotary Concrete Drill Co., Pasadena, Calif. (Drill bits)
- Roto-Table Co., Dayton, Ohio. (Power table for turning machines)
- Scheck, William, Ridgefield, N. J. (Punches & Scribes)
- Schild Mfg. Co., Milwaukee, Wis. (Cutters)
- Skilaw, Inc., Chicago, Ill. (Portable power tools)
- Smith & Son, Inc., Seymour, Oakville, Conn. (Clamp pliers)
- Snap-On Tools Corp., Kenosha, Wis. (Wrenches, hammers, dollies, rules, etc.)
- Stanley Tools, New Britain, Conn. (Punches, rules, cold chisels, levels, bit braces, squares, screw drivers, bars, hammers)
- Stortz & Son, Inc., John, Philadelphia, Pa. (Hammer, punches, chisels, rivet sets)
- Thompson & Son Co., Henry G., New Haven, Conn. (Saw blades)
- Topflight Tool Co., Huber Bldg., York, Pa. (Jigs, riveters, dimplers, rivet removers, scribing discs)
- Tri-Saw Corp., St. Louis, Mo. (Portable power saw)
- Vinco Products, Asbury Park, N. J. (Center punches)
- Vital Products Mfg. Co., Cleveland, Ohio. (Caulking guns & cartridges)
- Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric solder pots)
- Ward Machinery Co., Chicago, Ill. (Bender)
- Western Tool & Mfg. Co., Inc., Springfield, Ohio. (Clamps)
- Whipple Sheet Metal Works, M. S. & L. H., Lansing, Mich. (Clamps)
- Whitney Mfg. Co., W. A., Rockford, Ill. (Tinner's hammers)
- Whitney Metal Tool Co., Rockford, Ill. (Aircraft rivet squeezers, hand seamers, hammers, punches, rivet sets, awls)

TOPS, CHIMNEY

See Caps and Tops, Chimney

TORCHES, BRAZING, CUTTING, WELDING, OXY-ACETYLENE

- Aeroil Products Co., Inc., South Hackensack, N. J.
- Air Reduction Sales Co., New York, N. Y.
- American Products Corp., Chicago, Ill. (Alcohol)
- Atkins & Co., Inc., E. C., Indianapolis, Ind. (Brazing)
- Bastian-Blessing Co., Chicago, Ill.
- Bernz Co., Otto, Rochester, N. Y. (Brazing)
- Black Mfg. Co., Baltimore, Md.
- Born Mfg. Co., Elgin, Ill.
- Dockson Corp., Detroit, Mich.
- Ergolyte Mfg. Co., Philadelphia, Pa. (Electric)
- Eutectic Welding Alloys Corp., New York, N. Y.
- General Scientific Equipment Co., Philadelphia, Pa.
- Hamilton Tool Co., Hamilton, Ohio.
- Harris Calorific Co., Cleveland, Ohio.
- Imperial Brass Mfg. Co., Chicago, Ill.
- Lee Co., K. O., Aberdeen, S. D. (Welding)
- Linde Air Products Co., New York, N. Y.
- Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Marquette Mfg. Co., Inc., Minneapolis, Minn.

Met Sales & Mfg. Co., Rockford, Ill.

- Mid-States Welder Mfg. Co., Chicago, Ill. (Brazing & welding; ac & dc)

Minn-Kota Foundry & Mfg. Co., Fargo, N. D.

Modern Engineering Co., St. Louis, Mo.

National Cylinder Gas Co., Chicago, Ill.

- Reiner & Campbell Co., Inc., Newark, N. J.

Scully Engineering, Ltd., Los Angeles, Calif.

Smith Welding Equipment Corp., Minneapolis, Minn.

Trindl Products, Ltd., Chicago, Ill.

Weldit, Inc., Detroit, Mich.

TORCHES, SOLDERING

Acet-A-Tips Co., Chicago, Ill.

Air Reduction Sales Co., New York, N. Y.

Bastian-Blessing Co., Chicago, Ill.

Bernz Co., Otto, Rochester, N. Y.

Clayton & Lambert Mfg. Co., Louisville, Ky.

Diener Mfg. Co., Geo. W., Chicago, Ill.

Dockson Corp., Detroit, Mich.

Everhot Mfg. Co., Maywood, Ill.

Fusion Engineering, Cleveland, Ohio.

General Scientific Equipment Co., Philadelphia, Pa.

Harris Calorific Co., Cleveland, Ohio.

Ideal Industries, Inc., Sycamore, Ill.

Imperial Brass Mfg. Co., Chicago, Ill.

Insto-Gas Corp., Detroit, Mich.

- Johnson Gas Appliance Co., Cedar Rapids, Iowa.

Lenk Mfg. Co., Boston, Mass.

Linde Air Products Co., New York, N. Y.

Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.

Met Sales & Mfg. Co., Rockford, Ill.

Minn-Kota Foundry & Mfg. Co., Fargo, N. D.

Modern Engineering Co., St. Louis, Mo.

National Cylinder Gas Co., Chicago, Ill.

Pressure Products Corp., Chicago, Ill.

Ransome Co., Emeryville, Calif.

- Reiner & Campbell Co., Inc., Newark, N. J.

Sanders, J. A., Fulton, N. Y.

Scully Engineering, Ltd., Los Angeles, Calif.

Sight Feed Generator Co., West Alexandria, Ohio.

Smith Welding Equipment Corp., Minneapolis, Minn.

Torrit Mfg., Co., St. Paul, Minn.

- Turner Brass Works, Sycamore, Ill.

Unique Mfg. Co., Inc., Chicago, Ill. (Gasoline & Kerosene)

TRANSFORMERS, IGNITION

Davis & Co., Dean W., Kentland, Ind.

Dongan Electric Mfg. Co., Detroit, Mich.

- General Electric Co., Schenectady, N. Y.

Harvey, Inc., Sid., Valley Stream, N. Y.

Jefferson Electric Co., Bellwood, Ill.

Newark Transformer Co., Linden, N. J.

Super Electric Products Corp., Jersey City, N. J.

Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.

- Webster Electric Co., Racine, Wis.

TRANSFORMERS, LOW VOLTAGE

Barber-Colman Co., Rockford, Ill.

Crown Controls Co., Inc., New Bremen, Ohio.

Davis & Co., Dean W., Kentland, Ind.

Detroit Lubricator Co., Detroit, Mich.

Dongan Electric Mfg. Co., Detroit, Mich.

Fisler Engineering Co., Newark, N. J.

General Controls Co., Glendale, Calif.

- General Electric Co., Schenectady, N. Y.

Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.

Jefferson Electric Co., Bellwood, Ill.

Larkin Lectro Products Corp., Pine Bluff, Ark.

- Mercoir Corp., Chicago, Ill.

Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Taylor-Winfield Corp., Warren, Ohio.

Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.

Wagner Electric Corp., St. Louis, Mo.

- Webster Electric Co., Racine, Wis.

Westinghouse Electric Corp., Pittsburgh, Pa.

TRANSMISSIONS, VARIABLE SPEED

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Lowell Mfg. Co., Columbus, Ind.

Link-Belt Co., Chicago, Ill.

Reliance Electric & Engineering Co., Cleveland, Ohio.

Salisbury Motors, Inc., Pomona, Calif.

Stephens-Adamson Mfg. Co., Aurora, Ill.

Sterling Electric Motors, Inc., Los Angeles, Calif.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

TRUCKS, MOTOR

- Chevrolet Motor Div. General Motors Corp., Detroit, Mich.

Ford Motor Co., Dearborn, Mich.

McCabe Powers Auto Body Co., St. Louis, Mo.

TRIM, ORNAMENTAL

See Moulding and Trim, Ornamental

TUBING

Aluminum

Aluminum Co. of America, Pittsburgh, Pa.

Gray-Wilson Co., Detroit, Mich.

Lewin-Mathes, Lewis Metals Div., St. Louis, Mo.

New Holland Metals Co., Div. New Holland Machine Co., Mountville, Pa.

- Revere Copper & Brass Inc., New York, N. Y.

Reynolds Metals Co., Louisville, Ky.

United Wire & Supply Corp., Providence, R. I.

Wolverine Tube Div. Calumet & Hecla Consolidated Copper Co., Detroit, Mich.

Copper

American Brass Co., Waterbury, Conn.

Bridgeport Brass Co., Bridgeport, Conn.

Chase Brass & Copper Co., Inc., Waterbury, Conn.

Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.

Gray-Wilson Co., Detroit, Mich.

- Hussey & Co., C. G., Pittsburgh, Pa.

Kensico Tube Co., Mt. Kisco, N. Y.

Lewin-Mathes Co., Lewin Metals Div., St. Louis, Mo.

Mueller Brass Co., Port Huron, Mich.

Penn Brass & Copper Co., Erie, Pa.

Phelps Dodge Copper Products Corp., British American Tube Div., New York, N. Y.

- Revere Copper & Brass Inc., New York, N. Y.

United Wire & Supply Corp., Providence, R. I.

Wolverine Tube Div. Calumet & Hecla Consolidated Copper Co., Detroit, Mich.

Nickel and Nickel Alloy

Bundy Tubing Co., Detroit, Mich.

International Nickel Co., Inc., New York, N. Y.

- Revere Copper & Brass Inc., New York, N. Y.

Steel

Armco Steel Corp., Middletown, Ohio.

- Bethlehem Steel Co., Bethlehem, Pa.

Bundy Tubing Co., Detroit, Mich.

Central Steel & Wire Co., Chicago, Ill.

Crucible Steel Co. of America, New York, N. Y.

- Diekmann Co., Ferdinand, Cincinnati, Ohio. (Galv. speaking tube)

Jones & Laughlin Steel Corp., Pittsburgh, Pa.

Laclede Steel Co., St. Louis, Mo.

Michigan Steel Tube Products Co., Detroit, Mich.

National Tube Co., Pittsburgh, Pa.

Republic Steel Corp., Cleveland, Ohio.

- Revere Copper & Brass, Inc., New York, N. Y. (Welded)

SKF Steels Inc., New York, N. Y.

Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.

Timken Roller Bearing Co., Canton, Ohio.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Stainless

- Allegheny-Ludlum Steel Corp., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.

Crucible Steel Co. of America, New York, N. Y.

Hill-Chase & Co., Inc., Philadelphia, Pa.

Michigan Steel Tube Products Co., Detroit, Mich.

National Tube Co., Pittsburgh, Pa.

Republic Steel Corp., Cleveland, Ohio.

Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.

Timken Roller Bearing Co., Canton, Ohio.

UNIT HEATERS

See Furnaces, Winter Air Conditioning, Suspended Type

VACUUM CLEANERS FOR FURNACES

See Cleaners, Vacuum, Furnace

VALVES, GAS PRESSURE REGULATING

- American District Steam Co., Inc., North Tonawanda, N. Y.

Barber Gas Burner Co., Cleveland, Ohio.

Black, Sivalls & Bryson, Inc., Kansas City, Mo.

Davis Regulator Co., Chicago, Ill.
 Defender Instrument & Regulator Co., St. Louis, Mo.
 (Chromometer)
 Detroit Gas Regulator Co., Detroit, Mich.
 Dockson Corp., Detroit, Mich.
 Fisher Governor Co., Marshalltown, Iowa.
 Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
 General Controls Co., Glendale, Calif.
 Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.
 Harris Caloric Co., Cleveland, Ohio.
 Illinois Engineering Co., Chicago, Ill.
 • Mercoid Corp., Chicago, Ill.
 • Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Penn Electric Switch Co., Goshen, Ind.
 Pittsburgh Equitable Meter Div., Rockwell Mfg. Co., Pittsburgh, Pa.
 Reliance Regulator Div. American Meter Co., Inc., Alhambra, Calif.
 Reynolds Gas Regulator Co., Anderson, Ind.
 Standard Remote Control Valve Co., South Pasadena, Calif.
 Thermac Co., Los Angeles, Calif.
 Weldit, Inc., Detroit, Mich.

VALVES, HUMIDIFIER, WATER LEVEL

Beckett & Co., Thomas, Dallas, Texas.
 Fisher Governor Co., Marshalltown, Iowa.
 General Controls Co., Glendale, Calif.
 Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.
 Imperial Brass Mfg. Co., Chicago, Ill. (Saddle Valve)
 McDonnell & Miller, Inc., Chicago, Ill.
 • Maid-O'-Mist, Inc., Chicago, Ill.
 • Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 • Morey, Dan, Los Angeles, Calif.
 • Skuttle Mfg. Co., Detroit, Mich.
 • Viking Air Conditioning Corp., Cleveland, Ohio.

VALVES, SADDLE

See Fittings, Humidifier, Water Line

VALVES, SOLENOID

See Controls

VANES, DUCT TURNING, INSIDE DUCTS

Air Devices, Inc., New York, N. Y.
 • Anemostat Corp. of America, New York, N. Y. (Equalizing deflectors)
 • Barber-Colman Co., Rockford, Ill.
 Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
 Titus Mfg. Corp., Waterloo, Iowa.
 • Tuttle & Bailey, Inc., New Britain, Conn.

VENTILATOR AND FILTER UNITS, WINDOW

Airgard Mfg. Co., Chicago, Ill.
 Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
 Berns Mfg. Co., Chicago, Ill.
 Ilg Electric Ventilating Co., Chicago, Ill.
 Johnson Fan & Blower Corp., Chicago, Ill.
 Kaufman Air Conditioning Corp., St. Louis, Mo.
 Meier Electric & Machine Co., Inc., Indianapolis, Ind.
 Mellish & Murray Co., Chicago, Ill.
 National Appliance Co., Detroit, Mich.
 Reed Unit-Fans, Inc., New Orleans, La.
 Somers, Inc., H. J., Detroit, Mich.
 Trade-Winds Motorfans, Inc., Los Angeles, Calif.
 Unified Air Conditioner Co., Duluth, Minn.
 Utility Appliance Corp., Los Angeles, Calif.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

VENTILATORS

Ceiling

• Air Control Products, Inc., Coopersville, Mich.
 • Auer Register Co., Cleveland, Ohio.
 Barber-Colman Co., Rockford, Ill.
 Berger Furnace Mfg. Co., Pittsburgh, Pa.
 Best Register Co., Milwaukee, Wis.
 Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
 Decatur Iron & Steel Co., Decatur, Ala.
 • Elgo Shutter & Mfg. Co., Detroit, Mich.
 • Hart & Cooley Mfg. Co., Holland, Mich.
 • Inland Steel Products Co., Milwaukee, Wis.
 Kool Air Engineering Co., Can Bernardino, Calif.
 Lumm Co., A. H., Toledo, Ohio.
 • Miller & Doing, Brooklyn, N. Y.
 Robbins & Myers, Inc., Springfield, Ohio.
 Simpson Screen Co., Oakland, Calif.
 • Tuttle & Bailey, Inc., New Britain, Conn.
 • United States Register Co., Battle Creek, Mich.
 Universal Blower Co., Birmingham, Mich.

Mushroom

Aeolus Dickinson, Chicago, Ill.
 DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
 Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
 • Mueller Furnace Co., L. J., Milwaukee, Wis.
 Penn Ventilating Co., Philadelphia, Pa.

Roof, Fan

• Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
 Aeolus Dickinson, Chicago, Ill.
 Aerovent Fan Co., Piqua, Ohio.
 • Air Controls, Inc., Cleveland, Ohio.
 Aladdin Heating Corp., Oakland, Calif.
 Allen Ventilator Div. Production Planning Co., Rochester, Mich.
 American Coolair Corp., Jacksonville, Fla.
 American-Larson Ventilating Co., Pittsburgh, Pa.
 American Steel Band Co., Pittsburgh, Pa.
 Ammerman Co., C. L., Minneapolis, Minn.
 Arex Co., Chicago, Ill.
 Bar-Brook Mfg. Co., Inc., Shreveport, La.
 • Bishop & Babcock Mfg. Co., Cleveland, Ohio.
 Bishop Co., R. H., Champaign, Ill.
 Breidert Co., G. C., Los Angeles, Calif.
 Burt Mfg. Co., Akron, Ohio.
 Century Fan & Ventilator Co., Stamford, Conn. (Turbine)
 Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
 Chicago Blower Corp., Chicago, Ill.
 Chicago Fan & Fin Coil Co., Chicago, Ill.
 Clay Equipment Corp., Cedar Falls, Iowa.
 Dana Fan & Blower Corp., Cincinnati, Ohio.
 Davidson Hy Duty Roof Fan Co., Newton, Mass.
 DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
 Diehl Mfg. Co., Somerville, N. J.
 Dual-Air Fan Corp., South Elgin, Ill.
 Electrovent Fan & Mfg. Co., Chicago, Ill.
 Empire Ventilation Equipment Co., Long Island City, N. Y.
 Fingles Co., Baltimore, Md.
 Gallaher Co., Owatonna, Minn. & Omaha, Nebr.
 Gehri Co., Tacoma, Wash.
 Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
 Hirschman-Pohle Co., Inc., LeRoy, N. Y.
 Howes-Woods Co., Cambridge, Mass.
 Ilg Electric Ventilating Co., Chicago, Ill.
 International Engineering, Inc., Dayton, Ohio.
 Iona Ventilator Co., Inc., Philadelphia, Pa.
 Iron Lung Ventilator Co., Cleveland, Ohio.
 Jenn Air Products Co., Indianapolis, Ind.
 Johnson Fan & Blower Corp., Chicago, Ill.
 Jordan & Co., Inc., Paul R., Indianapolis, Ind.
 Kerchen Co., Chicago, Ill.
 King Co., Owatonna, Minn.
 Lee & Son Co., Thomas, Cincinnati, Ohio.
 Lumm Co., A. H., Toledo, Ohio.
 Martin Fan & Blower Co., Chicago, Ill.
 Mellish & Murray Co., Chicago, Ill.
 Mountain States Equipment Co., Denver, Ohio.
 Muckle Mfg. Co., Owatonna, Minn.
 Myers Electric Co., Inc., Pittsburgh, Pa.
 Newcomb-Detroit Co., Detroit, Mich.
 New York Blower Co., Chicago, Ill.
 Octagon Ventilator Co., Chicago, Ill.
 Overly Mfg. Co., Greensburg, Pa.
 Pennsylvania Wire Glass Co., Philadelphia, Pa.
 • Peerless Electric Co., Warren, Ohio.
 Penn Ventilating Co., Philadelphia, Pa.
 Pennsylvania Wire Co., Philadelphia, Pa.
 Riester & Thesmacher Co., Cleveland, Ohio.
 Robbins & Myers, Inc., Springfield, Ohio.
 Robertson Co., H. H., Pittsburgh, Pa. (Round-Rectangular)
 Royal Ventilator Co., Philadelphia, Pa.
 Somers, Inc., H. J., Detroit, Mich.
 • Swartwout Co., Cleveland, Ohio.
 Trade-Wind Motorfans, Inc., Los Angeles, Calif.
 Trane Co., LaCrosse, Wis.
 Truffo Fan Co., Harmony, Pa.
 Uno Ventilator Co., Saugus, Mass. (Turbine)
 Van Noorden Co., E., Boston, Mass.
 Waverly Heating Supply Co., Boston, Mass.
 • Western Engineering & Mfg. Co., Los Angeles, Calif.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Wind-Way Fan & Ventilator Co., New Orleans, La.
 Wing Mfg. Co., L. J., New York, N. Y.
 Winkler & Sons, Inc., A. E., Milwaukee, Wis.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Roof, Gravity

- Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
- Aeolus Dickinson, Chicago, Ill.
- Air Control Products, Inc., Coopersville, Mich.
- Air Devices, Inc., New York, N. Y.
- Airecon Industries, Detroit, Mich.
- Airjet Ventilator Co., Pasadena, Calif.
- Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
- Allen Ventilator Div. Production Planning Co., Rochester, Mich. (Turbine)
- American-Larson Ventilating Co., Pittsburgh, Pa.
- American Steel Band Co., Pittsburgh, Pa.
- Ammerman Co., C. L., Minneapolis, Minn.
- Appleton Supply Co., Inc., Appleton, Wis.
- Arex Co., Chicago, Ill.
- Autoforce Ventilating System, Boston, Mass.
- Berger Furnace Mfg. Co., Pittsburgh, Pa.
- Breidert Co., G. C., Los Angeles, Calif.
- Burt Mfg. Co., Akron, Ohio.
- Century Fan & Ventilator Co., Stamford, Conn.
- Clay Equipment Corp., Cedar Falls, Iowa.
- Danzer Metal Works Co., Hagerstown, Md.
- Edwards Mfg. Co., Inc., Cincinnati, Ohio.
- Empire Ventilation Equipment Co., Long Island City, N. Y.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Fingles Co., Baltimore, Md.
- Firecraft Corp., Chicago, Ill.
- Gehri Co., Tacoma, Wash.
- Hirschman-Pohle Co., Inc., LeRoy, N. Y.
- Howes-Woods Co., Cambridge, Mass.
- Inland Steel Products Co., Milwaukee, Wis.
- Iona Ventilator Co., Inc., Philadelphia, Pa.
- Iwan Bros. Inc., South Bend, Ind.
- Jordan & Co., Inc., Paul R., Indianapolis, Ind.
- Kernchen Co., Chicago, Ill.
- King Co., Owatonna, Minn.
- Klauer Mfg. Co., Dubuque, Iowa.
- LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
- Lee & Son Co., Thomas, Cincinnati, Ohio.
- Leslie Welding Co., Chicago, Ill.
- Lumm Co., A. H., Toledo, Ohio.
- Martin Fan & Blower Co., Chicago, Ill.
- Mellish & Murray Co., Chicago, Ill.
- Moesch-Edwards Corrugating Co., Inc., Cincinnati, Ohio.
- National Metal Fabricators, Chicago, Ill.
- Newcomb-Detroit Co., Detroit, Mich.
- Octagon Ventilator Co., Chicago, Ill.
- Overly Mfg. Co., Greensburg, Pa.
- Penn Supply & Metal Corp., Philadelphia, Pa.
- Penn Ventilating Co., Philadelphia, Pa.
- Pennsylvania Wire Glass Co., Philadelphia, Pa.
- Plasteel Products Co., Washington, Pa.
- Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
- Riggins Metal Products, Inc., Kankakee, Ill.
- Robertson Co., H. H., Pittsburgh, Pa. (Monitor)
- Royal-Apex Mfg. Corp., Brooklyn, N. Y.
- Royal Ventilator Co., Philadelphia, Pa.
- St. Paul Corrugating Co., St. Paul, Minn.
- Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
- Sioux Steel Co., Sioux Falls, S. D.
- Southbridge Roofing Co., Inc., Southbridge, Mass.
- Souther Iron Co., E. E., St. Louis, Mo.
- Standard Furnace Supply Co., Omaha, Nebr.
- Standard Ventilator Co., Lewisburg, Pa.
- Steinhart & Sons, Inc., Emil, Utica, N. Y.
- Swartwout Co., Cleveland, Ohio.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- Tienery Rotor Ventilator Co., Minneapolis, Minn.
- Tiffin Art Metal Co., Tiffin, Ohio.
- Uno Ventilator Co., Saugus, Mass.
- Vallas, Lionel, Chicago, Ill.
- Van Noorden Co., E., Boston, Mass.
- Warner Ventilator Co., LaGrange, Ind. (Spinner)
- Waverly Heating Supply Co., Boston, Mass.
- Western Engineering & Mfg. Co., Los Angeles, Calif.
- Willis Steel Corp., Galesburg, Ill.
- Winkler & Sons, Inc., A. E., Milwaukee, Wis.
- York Corrugating Co., York, Pa.

VIBRATION ISOLATORS

See Bases and Pads

WARM AIR REGISTER SHIELDS

See Shields, Warm Air Register

• Advertisement in this issue. See Index to Advertisers, page 104-D.

WASHERS, AIR, HEATING AND VENTILATING

(Capacity 4,000 c.f.m. and up)

- Air & Refrigeration Corp., New York, N. Y.
- Alton Mfg. Co., Dallas, Texas.
- American Blower Corp., Detroit, Mich.
- Bayley Blower Co., Milwaukee, Wis.
- Bishop & Babcock Mfg. Co., Cleveland, Ohio.
- Blower Application Co., Milwaukee, Wis.
- Buffalo Forge Co., Buffalo, N. Y.
- Carrier Corp., Syracuse, N. Y.
- Centri-Spray Co., Detroit, Mich.
- Clarage Fan Co., Kalamazoo, Mich.
- Columbus Heating & Ventilating Co., Columbus, Ohio.
- Comfort Products Corp., Dallas, Texas.
- Furbio Co., Hermansville, Mich.
- Mellish & Murray Co., Chicago, Ill.
- Mountain States Equipment Co., Denver, Colo.
- New York Blower Co., Chicago, Ill.
- Northern Blower Co., Cleveland, Ohio.
- Peters-Dalton, Inc., Detroit, Mich.
- Schmieg Industries, Detroit, Mich.
- Spray Engineering Co., Somerville, Mass.
- Strandwitz & Co., Inc., W. J., Camden, N. J.
- Tenny Engineering, Inc., Newark, N. J.
- Trane Co., LaCrosse, Wis.
- U. S. Air Conditioning Corp., Minneapolis, Minn.
- Utility Appliance Corp., Los Angeles, Calif.
- Vilter Mfg. Co., Milwaukee, Wis.
- Western Blower Co., Seattle, Wash.
- Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- York Corp., York, Pa.

WATERPROOFING

(Coating material)

- American Fluoresit Co., Cincinnati, Ohio.
- Angier Corp., Framingham, Mass.
- Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
- Cabot Inc., Samuel, Boston, Mass.
- Carey Mfg. Co., Philip, Cincinnati, Ohio.
- Carter Paint Co., Liberty, Ind.
- Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
- Evercrete Corporation, New York, N. Y.
- Flankote Co., New York, N. Y.
- Glidden Co., Cleveland, Ohio.
- Henderson & Co., Peter, New York, N. Y. (Coating)
- Horn Co., Inc., A. C., Long Island City, N. Y.
- Johns-Manville, New York, N. Y.
- Koppers Co., Inc., Pittsburgh, Pa.
- Lehon Co., Chicago, Ill.
- Metropolitan Refining Co., Inc., Long Island City, N. Y.
- Nebel Mfg. Co., Cleveland, Ohio.
- Pabco Products Inc., San Francisco, Calif.
- Reilly Tar & Chemical Corp., Indianapolis, Ind.
- Ruberoid Co., New York, N. Y.
- Sisalkraft Co., Chicago, Ill.
- Sonneborn Sons, Inc., L., New York, N. Y.
- Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
- Tamms Industries Inc., Chicago, Ill.
- Toch Brothers, Inc., Staten Island, N. Y.
- Trusco Laboratories, Detroit, Mich.
- Wasco Flashing Co., Cambridge, Mass.
- X-Pando Corp., Long Island City, N. Y.

WATER HEATING COILS, FIREPOT

See Coils, Fire Pot, Domestic Hot Water

WELDERS

Art

- A-C Devices Co., Chicago, Ill.
- Air Reduction Sales Co., New York, N. Y.
- Borm Mfg. Co., Elgin, Ill. (ac)
- Chicago Precision Machine Co., Chicago, Ill.
- Electric Arc, Inc., Newark, N. J.
- Ergolyte Mfg. Co., Philadelphia, Pa.
- Eutectic Welding Alloys Corp., New York, N. Y. (ac)
- Fern, Ralph, Scranton, Pa.
- General Electric Co., Schenectady, N. Y.
- Glenn-Roberts Co., Oakland, Calif.
- Hammett Electric Mfg. Co., Kansas City, Mo.
- Hampton Electric Mfg. Co., Pittsburgh, Pa.
- Harnischfeger Corp., Milwaukee, Wis. (Ac & dc)
- Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
- Hobart Bros. Co., Troy, Ohio. (Ac & dc)
- Hollup Corp., Div. National Cylinder Gas Co., Chicago, Ill.
- Larkin Lectro Products Corp., Pine Bluff, Ark. (ac)
- Lee Co., K. O., Aberdeen, S. D. (ac)
- Lincoln Electric Co., Cleveland, Ohio.

Marquette Mfg. Co., Inc., Minneapolis, Minn. (ac)
 Metal & Thermit Corp., New York, N. Y. (ac & dc)
 Metalweld, Inc., Philadelphia, Pa.
 • Mid-States Welder Mfg. Co., Chicago, Ill. (ac)
 Miller Electric Mfg. Co., Inc., Appleton, Wis. (ac & dc)
 National Cylinder Gas Co., Chicago, Ill. (ac & dc)
 Nelson Specialty Welding Equipment Corp., San Leandro, Calif. (Stud welder)
 Nelson Stud Welding Div. Morton Gregory Corp., Lorain, Ohio. (dc)
 Smith Corp., A. O., Milwaukee, Wis.
 Smith Welding Equipment Corp., Minneapolis, Minn. (ac)
 Trindl Products, Ltd., Chicago, Ill. (ac)
 Westinghouse Electric Corp., Pittsburgh, Pa.
 Will-Weld Mfg. Co., Inc., Omaha, Nebr. (ac)

Projection

Acme Electric Welder Co., Los Angeles, Calif.
 Acro Welder Mfg. Co., Milwaukee, Wis.
 Agnew Electric Co., Milford, Mich.
 Eisler Engineering Co., Newark, N. J.
 Federal Machine & Welder Co., Warren, Ohio.
 Larkin Lectro Products Corp., Pine Bluff, Ark.
 National Electric Welding Machines Co., Bay City, Mich.
 Peer, Inc., Benton Harbor, Mich.
 Precision Welder & Machine Co., Cincinnati, Ohio.
 Progressive Welder Sales Co., Detroit, Mich.
 Rex Welder & Engineering Co., Kansas City, Mo.
 Sciaky Bros., Inc., Chicago, Ill.
 Swift Electric Welder Co., Detroit, Mich.
 Taylor-Winfield Corp., Warren, Ohio.
 Thomson Electric Welder Co., Lynn, Mass.
 Universal Welder Corp., Cleveland, Ohio.
 Welding Machines Mfg. Co., Detroit, Mich.

Resistance

Acme Electric Welder Co., Los Angeles, Calif.
 Acro Welder Mfg. Co., Milwaukee, Wis.
 Agnew Electric Co., Milford, Mich.
 Banner Products Co., Milwaukee, Wis.
 DoALL Co., Des Plaines, Ill.
 Eisler Engineering Co., Newark, N. J.
 Expert Welding Machine Co., Detroit, Mich.
 Federal Machine & Welder Co., Warren, Ohio.
 Larkin Lectro Products Corp., Pine Bluff, Ark.
 Mallory & Co., Inc., P. R., Indianapolis, Ind.
 Metalweld, Inc., Philadelphia, Pa.
 Micro Products Co., Chicago, Ill.
 National Electric Welding Machines Co., Bay City, Mich.
 Peer, Inc., Benton Harbor, Mich.
 Precision Welder & Machine Co., Cincinnati, Ohio.
 Progressive Welder Sales Co., Detroit, Mich.
 Rex Welder & Engineering Co., Kansas City, Mo.
 Sciaky Bros., Inc., Chicago, Ill.
 Swift Electric Welder Co., Detroit, Mich.
 Taylor-Winfield Corp., Warren, Ohio.
 Thomson Electric Welder Co., Lynn, Mass.
 Universal Welder Corp., Cleveland, Ohio.

Seam

Acro Welder Mfg. Co., Milwaukee, Wis.
 Electrical Maintenance & Eng. Co., Cleveland, Ohio. (Attachment)
 Federal Machine & Welder Co., Warren, Ohio.
 Larkin Lectro Products Corp., Pine Bluff, Ark.
 National Electric Welding Machines Co., Bay City, Mich.
 Precision Welder & Machine Co., Cincinnati, Ohio.
 Progressive Welder Sales Co., Detroit, Mich.
 Sciaky Bros., Inc., Chicago, Ill.
 Swift Electric Welder Co., Detroit, Mich.
 Taylor-Winfield Corp., Warren, Ohio.
 Thomson Electric Welder Co., Lynn, Mass.
 Universal Welder Corp., Cleveland, Ohio.
 Welding Machines Mfg. Co., Detroit, Mich.

Spot

A-C-Devices Co., Chicago, Ill.
 Acme Electric Welder Co., Los Angeles, Calif.
 Acro Welder Mfg. Co., Milwaukee, Wis.
 Agnew Electric Co., Milford, Mich.
 Alphil Spot Welding Co., Brooklyn, N. Y.
 Banner Products Co., Milwaukee, Wis.
 Curley Electric Mfg. Co., Culver City, Calif.
 Eisler Engineering Co., Newark, N. J.
 Electric Arc, Inc., Newark, N. J.
 Federal Machine & Welder Co., Warren, Ohio.
 Fern, Ralph, Scanton, Pa.
 Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.

Larkin Lectro Products Corp., Pine Bluff, Ark.
 Micro Products Co., Chicago, Ill.
 • Mid-States Welder Mfg. Co., Chicago, Ill. (Portable)
 Miller Electric Mfg. Co., Inc., Appleton, Wis.
 National Electric Welding Machines Co., Bay City, Mich.
 National Cylinder Gas Co., Chicago, Ill.
 Peer, Inc., Benton Harbor, Mich.
 Precision Welder & Machine Co., Cincinnati, Ohio.
 Progressive Welder Sales Co., Detroit, Mich.
 Rex Welder & Engineering Co., Kansas City, Mo.
 Sciaky Bros., Inc., Chicago, Ill.
 Swift Electric Welder Co., Detroit, Mich.
 Taylor-Winfield Corp., Warren, Ohio.
 Thomson Electric Welder Co., Lynn, Mass.
 Universal Welder Corp., Cleveland, Ohio.
 Weldex, Inc., Detroit, Mich.
 Welding Machines Mfg. Co., Detroit, Mich.
 Westinghouse Electric Corp., Pittsburgh, Pa.

WELDING ROD

See Rod, Welding

WELDING TORCHES

See Torches, Brazing, Cutting, Welding

WHEELS, BLOWER

Advance Aluminum Castings Corp., Chicago, Ill.
 • Air Controls, Inc., Cleveland, Ohio.
 • Airfan Engineering Co., Los Angeles, Calif.
 • Bayley Blower Co., Milwaukee, Wis.
 • Bishop & Babcock Mfg. Co., Cleveland, Ohio.
 • Brundage Co., Kalamazoo, Mich.
 Champion Blower & Forge Co., Lancaster, Pa.
 Chicago Blower Corp., Chicago, Ill.
 • Clarage Fan Co., Kalamazoo, Mich.
 Connecticut Blower Co., Hartford, Conn.
 General Blower Co., Morton Grove, Ill.
 Goettl Bros., Phoenix, Ariz.
 Hastings Air Conditioning Co., Inc., Hastings, Nebr.
 Jaden Mfg. Co., Hastings, Nebr.
 Jan-Air, Inc., Richmond, Ill.
 Johnson Fan & Blower Corp., Chicago, Ill.
 • Lau Blower Co., Dayton, Ohio.
 Martin Fan & Blower Co., Chicago, Ill.
 Mayne Products Co., Dayton, Ohio.
 • Morrison Products, Inc., Cleveland, Ohio.
 New York Blower Co., Chicago, Ill.
 Peerless Electric Co., Warren, Ohio.
 Revcor, Chicago, Ill.
 Schwitzer-Cummins Co., Indianapolis, Ind.
 Torrington Mfg. Co., Torrington, Conn.
 Trane Co., LaCrosse, Wis.
 • Triangle Mfg. Co., Oshkosh, Wis.
 U. S. Air Conditioning Corp., Minneapolis, Minn.
 Utility Appliance Corp., Los Angeles, Calif.
 • Viking Air Conditioning Corp., Cleveland, Ohio.
 Western Blower Co., Seattle, Wash.
 Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

WINDOWS, METAL, HOLLOW OR EXTRUDED

• Adams Co., Dubuque, Iowa.
 Biersach & Neidermeyer Co., Milwaukee, Wis.
 Edwards Mfg. Co., Inc., Cincinnati, Ohio.
 International Steel Co., Evansville, Ind.
 Jamestown Metal Corp., Jamestown, N. Y.
 Perkinson & Brown, Chicago, Ill.
 Reynolds Metals Co., Louisville, Ky. (Aluminum)
 Russell Co., F. C., Cleveland, Ohio.
 Truscon Steel Co., Youngstown, Ohio.
 Vallas Lionel, Chicago, Ill.
 • Willis Steel Corp., Galesburg, Ill.

WIRE GLASS

See Glass, Wire

WIRE

Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless)
 Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
 American Nickeloid Co., Peru, Ill. (Chrome, nickel coated)
 American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
 Armco Steel Corp., Middletown, Ohio. (Stainless steel)
 Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
 Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
 • Bethlehem Steel Co., Bethlehem, Pa. (Plain, galvanized)

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Chase Brass & Copper Co., Inc., Waterbury, Conn. (Coppered)
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
(Brass, copper & bronze)

- Continental Steel Corp., Kokomo, Ind.
- Copperweld Steel Co., Glassport, Pa. (Copper coated steel)
- Eagle-Picher Co., Cincinnati, Ohio. (Lead)
- Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
- International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)

Jones & Laughlin Steel Corp., Pittsburgh, Pa. (Galvanized)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)

Laclede Steel Co., St. Louis, Mo.
National Lead Co., New York, N. Y. (Lead & tin)

Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa. (Carbon steel & stainless steel)
Republic Steel Corp., Cleveland, Ohio. (Steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Roebbing's Sons Co., John A., Trenton, N. J. (Steel & copper)
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., New York, N. Y.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

WIRING MACHINES

See Machines, Wiring

ZONE CONTROLS

See Controls; Control Systems

Section of American Artisan

1951 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[Section 2-TRADE NAMES]

A

- AAF—Air Filters. American Air Filter Co., Inc., Louisville, Ky.
- ABC—Blower-Washer Units. American Blower Corp., Detroit, Mich.
- ABC—Heaters. Victor Oil Burner Mfg. Co., Hartford, Conn.
- ABC—Oil Burners. Automatic Burner Corp., Chicago, Ill.
- Abrasoweld—Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
- A/C—Washable Filters. American Air Filter Co., Inc., Louisville, Ky.
- ACB—Metal Protecting Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
- Ace—Damper Regulators. Martens & Stormoen Co., Boston, Mass.
- Ace—Hammers and Mallets. Dan Morey, Los Angeles, Calif.
- Acid-Proof—Insulating Cement. Quigley Co., New York, N.Y.
- Acmeley—Electrodes. Acme Electric Welder Co., Los Angeles, Calif.
- Acoustiglu—Cement. Hetzel Roofing Products Co., Newark, N.J.
- Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Activ-Air—Air Conditioning Furnaces. Heil Co., Milwaukee, Wis.
- Activ-Flame—Oil Burners. Heil Co., Milwaukee, Wis.
- A-D Board—Board for Ducts. Philip Carey Mfg. Co., Cincinnati, Ohio.
- Ada-Stic—Insulating Cement. Botfield Refractories Co., Philadelphia, Pa.
- Adacast—Refractories. Botfield Refractories Co., Philadelphia, Pa.
- Adamant—Insulating Cement. Refractories. Botfield Refractories Co., Philadelphia, Pa.
- Adapatch—Refractories. Botfield Refractories Co., Philadelphia, Pa.
- Aeracool—Fan Blades, Fans, Louvers and Shutters, Ventilators. Myers Electric Co., Pittsburgh, Pa.
- Aerisweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
- Aero—Fans. Pryne & Co., Inc., Pomona, Calif.
- Aerofuse—Air Diffusers. Tuttle & Bailey, Inc., New Britain, Conn.
- Aerolux—Oil Furnaces. S. T. Johnson Co., Oakland, Calif.
- Aeromatic—Furnaces. United Air Heaters, Inc., Seattle, Wash.
- Aeropel—Kitchen Exhaust Fans. American Blower Corp., Detroit, Mich.
- Aeroplane—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.
- Aeroplex—Blowers. Bayley Blower Co., Milwaukee, Wis.
- Aeropull—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.
- Aerovane—Mushroom Ventilators. Knowles Mushroom Ventilator Co., Upper Montclair, N.J.
- Aerovane—Anemometers. Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
- Aerovane—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.
- Afco—Blowers, Blower-Filters, Furnaces and Stokers, Gas and Oil Burners. American Furnace Co., St. Louis, Mo.
- Afco Base Blo—Furnaces. American Furnace Co., St. Louis, Mo.
- Afco Duo Blo—Furnaces. American Furnace Co., St. Louis, Mo.
- Afco Master-Gas—Furnaces. American Furnace Co., St. Louis, Mo.
- Afco Oil Master—Furnaces. American Furnace Co., St. Louis, Mo.
- Afco—Grilles, Louvers, American Foundry & Furnace Co., Bloomington, Ill.
- Age—Oil Burners. All-Gas Equipment Co., Milwaukee, Wis.
- Agile—Welding Electrodes. American Agile Corp., Cleveland, Ohio.
- Agitair—Air Diffusers, Filters, Vanes, Ventilators. Air Devices Inc., New York, N.Y.
- Air-Con—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N.Y.
- Air Control—Air Conditioning Units, Blowers, Blower-Filter Units, Blower Housings, Coils, Registers, and Blower Wheels. Hastings Air Conditioning Co., Inc., Hastings, Nebr.
- Air Controls—Ridge Ventilator. Plasteel Products Co., Washington, Pa.
- Air Drills—Pneumatic Tools. Air-Speed Tool Co., Los Angeles, Calif.
- Air-Dryette Jr.—Dehumidifiers. Solvay Sales Div., Allied Chemical & Dye Corp., New York, N.Y.
- Air-Flo—Motor Operated Louvers. Air Conditioning Products Co., Detroit, Mich.
- Air Flow—Blowers, Fans, Blower Wheels. Goettl Bros., Phoenix, Ariz.
- Air Guide—Duct Vanes. Titus Mfg. Corp., Waterloo, Iowa.
- Air-Lift—Blowers and Fans. Mauer Engineering. Evanston, Ill.
- Air-Max—Roof Ventilators, Ventilating Fans. Gallaher Co., Owatonna, Minn. and Omaha, Nebr.
- Air Meter—Anemometers. Hastings Instrument Co., Inc., Hampton, Va.
- Air-O-Line—Propeller Fan Blades, Pumps, Valves. Thomas Beckett & Co., Dallas, Texas.
- Air-Out—Ventilator. Accurate Sheet Metal & Mfg. Co., Chicago, Ill.
- Air Renewer—Blower-Filter Units. Brundage Co., Kalamazoo, Mich.
- Air-Rite—Evaporative Coolers. National Engineering & Mfg. Co., Kansas City, Mo.
- Air-Seel—Oil Burners. Silent Glow Oil Burner Corp., Hartford, Conn.
- Air Tumbler—Dust Collectors. Dust Suppression & Engineering Co., Lake Orion, Mich.
- Air-Turn—Vanes. Barber-Colman Co., Rockford, Ill.
- Air Valve—Ventilators. Swartwout Co., Cleveland, Ohio.
- Air-Van—Roof Ventilators, Ventilating Fans. Gallaher Co., Owatonna, Minn. and Omaha, Nebr.
- Air-Vane—Registers. Rock Island Register Co., Rock Island, Ill.
- Air-Vent—Roofing Felt. Ruberoid Co., New York, N.Y.
- Air Wave—Ventilating Fans. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
- Air-X-Hauser—Ventilators. G. C. Breidert Co., Los Angeles, Calif.
- Airacoustic—Insulation. Johns-Manville, New York, N.Y.
- Airate—Ventilators. Aeolus Dickinson, Chicago, Ill.
- Airboy—Blower-Filter Units. Peerless Electric Co., Warren, Ohio.
- Aircell—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.
- Airco—Electrodes, Soldering Flux, Welding Rod, Torches and Welding Equipment. Air Reduction Sales Co., New York, N.Y.
- Aire-Flo—Furnaces, Air Conditioning Units, Blower-Filter Units. Lennox Furnace Co., Marshalltown, Iowa.
- Aire-RAY-ator—Furnaces. Ray Oil Burner Co., San Francisco, Calif.
- Airex—Evaporative Coolers, Blowers, Fans, Washers. Mountain States Equipment Co., Denver, Colo.
- Airflo—Pipe, Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
- Airfoil—Axial Flow Fans. Thermo-Aire Div., Evans Products Co., Plymouth, Mich.
- Airfoil—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Piqua, Ohio.
- Airfoil—Grilles, Louvers, Registers. Titus Mfg. Corp., Waterloo, Iowa.
- Airguide—Hygrometers and Thermometers. Fee & Stewwedel, Inc., Chicago, Ill.
- Airidge—Ridge Ventilators. Aeolus Dickinson, Chicago, Ill.

Airistocrat—Fan Blades. Torrington Mfg. Co., Torrington, Conn.
 Airjector—Ventilators. Swartwout Co., Cleveland, Ohio.
 Airlift—Ventilators. Swartwout Co., Cleveland, Ohio.
 Airliner—Fan Blades. Alan E. Burden Co., Hollywood, Calif.
 Airlouwer—Louvers. Swartwout Co., Cleveland, Ohio.
 Airmat—Dust Collectors, Filters. American Air Filter Co., Inc., Louisville, Ky.
 Airmover—Ventilators. Swartwout Co., Cleveland, Ohio.
 Airo-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
 Airotor—Blower Wheels. Torrington Mfg. Co., Torrington, Conn.
 Aisran—Wire Cloth Filters. Air Filter Corp., Milwaukee, Wis.
 Airstat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Airstream—Blower Wheels. Morrison Products, Inc., Cleveland, Ohio.
 Airopia—Air Conditioning Units. Drayer-Hanson, Inc., Los Angeles, Calif.
 Airway—Louvers and Ventilators. Firecraft Corp., Chicago, Ill.
 Airweight—Aluminum Ladders. Newark Ladder & Bracket Co., Inc., Rahway, N. J.
 AirXpeler—Exhausters, Fans, and Ventilators. C. L. Ammerman Co., Minneapolis, Minn.
 Akron Air Blast—Furnaces. May-Fieberger Co., Newark, Ohio.
 Aktiv—Cleaning Compound. Turco Products, Inc., Los Angeles, Calif.
 Alclad—Sheets. Aluminum Company of America, Pittsburgh, Pa.
 Alco—Ventilators. A. H. Lumm Co., Toledo, Ohio.
 Alcoa—Aluminum Products. Aluminum Co. of America, Pittsburgh, Pa.
 All-Alloy—Shears. Bremil Mfg. Co., Erie, Pa.
 All-Sol—Flux. L. B. Allen Co., Inc., Chicago, Ill.
 Allegheny Metal—Stainless. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
 Allen-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago, Ill.
 Allerton—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Allrite—Insulation. Coast Insulating Product, Los Angeles, Calif.
 Alma—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
 Almar—Hand Slitting Machines, Power Flanging Machines. Ward Machinery Co., Chicago, Ill.
 Almar Easy—Rotary Slitting Shears. Ward Machinery Co., Chicago, Ill.
 Alnor—Thermometers. Illinois Testing Laboratories, Inc., Chicago, Ill.
 Alodine—Aluminum surface treatment. American Chemical Paint Co., Ambler, Pa.
 Alpine—Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.
 Alumaloy—Filters. Research Products Corp., Madison, Wis.
 Alumaroll—Metal Awnings. Wagner Awning & Mfg. Co., Cleveland, Ohio.
 Alumaweld—Flux and Solder. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
 Alumbrite—Paint. Thompson & Co., Oakmont, Pa.
 Alumi-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago, Ill.
 Alumi-Solder—Aluminum Solder. L. B. Allen Co., Inc., Chicago, Ill.
 Aluminu—Metal Cleaner. NuSteel Co., Chicago, Ill.
 Aluminized—Clad Sheets. American

Rolling Mill Co., Middletown, Ohio.
 Aluminweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Always Reliable—Soldering Furnaces, Mallets, Torches. Otto Bernz Co., Rochester, N.Y.
 AM—Solder. Alpha Metals, Inc., Brooklyn, N.Y.
 Am-Pe-Co—Blowers, Exhausters. American Machine Products Co., Marshalltown, Iowa.
 Amazon—Water Heaters. Mustee Heater Co., Cleveland, Ohio.
 Amco—Psychrometers. Grinnell Co., Inc., Providence, R. I.
 Amco—Cabinets (Furnaces, Blowers, Air Conditioners). Atlas Mfg. Co., St. Paul, Minn.
 Amco—Flux. American Solder & Flux Co., Philadelphia, Pa.
 Amcoil—Air Conditioners. American Coils, Inc., Newark, N. J.
 Amer-glas—Air Filters. American Air Filter Co., Inc., Louisville, Ky.
 American—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.
 American HV—Filters. American Air Filter Co., Inc., Louisville, Ky.
 Amerock—Cabinet and Casing Hardware. American Cabinet Hardware Corp., Rockford, Ill.
 Aminco—Hygrometers, Relays, Thermostats. American Instrument Co., Silver Spring, Md.
 AMS—Pumps. American-Marsh Pumps, Inc., Battle Creek, Mich.
 Anaconda—Copper and Brass Products. American Brass Co., Waterbury, Conn.
 Anchor—Evaporative Coolers, Furnaces. W. H. Stewart Company, Oklahoma City, Okla.
 Anchor—Hangers. Royal-Apex Mfg. Corp., Brooklyn, N. Y.
 Anchor Brand—Rivets. Townsend Co., New Brighton, Pa.
 Anchor Brand—Soldering Flux. Garden City Laboratory Div., Pritchardsons, Chicago, Ill.
 AnchorAire—Furnaces. Anchor Div., Stratton & Testegge Co., New Albany, Ind.
 Anchorfast—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
 Anchorite—Nails. Dickson Weatherproof Nail Co., Evanston, Ill.
 Anglelevel—Level and Angle Indicator. R-D Sales Co., Flint, Mich.
 Anthra-flo—Coal Fired Air Conditioning Furnaces. Coal-O-Matic Co., Trucksville, Pa.
 Anti-Pluvius—Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.
 Apartvent—Window Ventilating Fans. Autovent Fan & Blower Div., Herman Nelson Corp., Chicago, Ill.
 Apex—Quadrants. Ohio Products Co., Cleveland, Ohio.
 Apexo—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
 Apollo—Copper Steel. Apollo Steel Co., Apollo, Pa.
 Appton—Pneumatic Hammer. Brown-Appton Co., New York, N. Y.
 Aphor—Oil Burner Nozzles. Boston Machine Works Co., Lynn, Mass.
 Aqua-Clear—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.
 Aqua-Scale—Automatic Humidifier. J. P. Glasby Mfg. Co., Bloomfield, N. J.
 Aquabar—Roof Cement. Continental Products Co., Euclid, Ohio.
 Aquadam—Roof Cement. Blue Ridge Talc Co., Inc., Henry, Va.
 Aquamat—Thermostats. Schaefer Electrical Products Co., Detroit, Mich.
 Aquaproof—Caulking Compounds, Paint and Waterproofing. Metropolitan Refining Co., Inc., Long Island City, N.Y.

Aquella—Waterproofing. Peter Henderson & Co., New York, N. Y.
 Aqulux—Water Heaters. S. T. Johnson Co., Oakland, Calif.
 AAR—Louvers and Shutters. Air & Refrigeration Corp., New York, N. Y.
 ARA—Asbestos Return Air Sheets. Grant Wilson, Inc., Chicago, Ill.
 Arc-Eng—Air Conditioning Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
 Arcolame—Oil Burners. American Rad. & Standard Sanitary Corp., Pittsburgh, Pa.
 Arctic—Air Conditioning Units. Premier Furnace Co., Dowagiac, Mich.
 Arctic Circle—Evaporative Coolers. Goettl Bros., Phoenix, Ariz.
 Arctic Circle—Evaporative Coolers. International Metal Products Company, Phoenix, Ariz.
 Arex-Autor—Ventilators. Arex Co., Chicago, Ill.
 Arin Accelerator—Louvers and Shutters. Arex Co., Chicago, Ill.
 Arin Stationary—Louvers and Shutters. Arex Co., Chicago, Ill.
 Arkay—Furnaces. Quiet Automatic Burner Corp., Newark, N. J.
 Arlington—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Armorize—Paint. Carter Paint Co., Liberty, Ind.
 Armstrong—Compressors. General Machinery Co., Spokane, Wash.
 Arrow—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
 Arrowtrol—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
 Artcraft—Blowers and Furnaces. Chicago Steel Furnace Co., Chicago, Ill.
 ASARCO—Sheets and Roofing. Federated Metals Div., American Smelting and Refining Co., New York, N.Y.
 Asbestile—Roof Cement. Johns-Manville, New York, N.Y.
 Asbestocel—Furnace Insulation. Johns-Manville, New York, N.Y.
 ASBO—Ventilators. American Steel Band Co., Pittsburgh, Pa.
 Asco—Nozzles. April Showers Co., Inc., Washington, D. C.
 Asco—Relays, Switches, Valves. Automatic Switch Co., Orange, N. J.
 ASMC—Flux. Farrelloy Co., Philadelphia, Pa.
 Asphalt Seal—Roofing Paint. Evercrete Corp., New York, N. Y.
 At-A-Glance—Oil Tank Gauge. Krueger Sentry Gauge Co., Green Bay, Wis.
 ATC—Thermostats. Ajax Thermostatic Controls Co., Gates Mills, Ohio.
 atc—Welding Timers. Automatic Temperature Control Co., Inc., Philadelphia, Pa.
 Ath-A-Nor—Furnaces. May-Fieberger Co., Newark, Ohio.
 Atlas—Blowers, Furnaces. International Sales Co., San Francisco, Calif.
 Atomick—Humidifiers, Nozzles. Maid-O'-Mist, Inc., Chicago, Ill.
 Atomist—Humidifiers. American Foundry & Furnace Co., Bloomington, Ill.
 Attifan—Fans and Ventilators. Kool Air Engineering Co., San Bernardino, Calif.
 Auto—Humidifier Valves, Maid-O'-Mist, Inc., Chicago, Ill.
 Auto-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meriden, Conn.
 Autoclean—Air Filters. Day Co., Minneapolis, Minn.
 Autocrat—Oil Burners, Air Conditioning Furnaces. Chandler Co., Cedar Rapids, Iowa.
 Automat—Gas Burners. National Engineering & Mfg. Co., Kansas City, Mo.

Autostart—Buffers. U. S. Electrical Motors, Inc., Los Angeles, Calif.
Autothem—Gas Conversion Burner. Hook & Ackerman, Inc., New York, N. Y.
Aviation—Snips. Penn Tool Co., Philadelphia, Pa.
AW—Plates, Sheets, Hardened Masonry Nails. Alan Wood Steel Co., Conshohocken, Pa.
AX—Oil Burners. Aldrich Co., Wyoming, Ill.
Axiflo—Fans. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Axivane—Fans. Joy Mfg. Co., New Philadelphia, Pa.

B

B-60—Controls. General Controls Co., Glendale, Calif.
Bacite—Insulating Cement. Bird Archer Co., Philadelphia, Pa.
Baco—Refractories. Bird Archer Co., Philadelphia, Pa.
Badger—Time Switches. Reliance Automatic Lighting Co., Racine, Wis.
Baffle Mix—Refractories. Walsh Refractories Corp., St. Louis, Mo.
Balanced Isolator—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.
Ball Flame—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.
Balsam Wool—Flexible Insulation. Wood Conversion Co., St. Paul, Minn.
Bankheat—Oil Burners. S. T. Johnson Co., Oakland, Calif.
Banner—Refractories. Chicago Fire Brick Co., Chicago, Ill.
Bantam—Motors. Small Motors, Inc., Chicago, Ill.
Bantam—Shear. Lincoln Machine Co., Boston, Mass.
Bantam Bully—Air Hammer. Superior Pneumatic Div., Herbrand Tools, Cleveland, Ohio.
Bar-Ox—Rust Inhibitor. Truscon Laboratories, Detroit, Mich.
Bar Rust—Metal Protecting Paints. Midland Paint & Varnish Co., Cleveland, Ohio.
Barcol—Motors. Barber-Colman Co., Rockford, Ill.
Barreled Sunlight—Paint. U. S. Gutta Percha Paint Co., Providence, R. I.
Barrett Specification—Roofing Felt. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Barry—Pillow Blocks, Pulleys. R. & J. Dick Co., Inc., Passaic, N. J.
Basa—Mallets. Greene, Tweed & Co., North Wales, Pa.
Base Isolator—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.
Basmor—Air Conditioning Furnace. Bastian-Morley Co., Inc., LaPorte, Ind.
Baso—Gas Pilots. Milwaukee Gas Specialty Co., Milwaukee, Wis.
BB—Blast Gates, Roof Clips, Damper Clips and Tips, Conductor Fittings and Accessories, Snow Guards. Berger Brothers Co., Philadelphia, Pa.
B&B—Louvers & Shutters, Blower Wheels. Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Beckett—Gas Burners. Horsman-Markin Corp., Detroit, Mich.
Beckett Commodore—Oil Burners. R. W. Beckett Corp., Elyria, Ohio.
Belco—Fans, Louvers. G. J. Belter Electric Mfg. Co., St. Louis, Mo.
Beloit—Sheet Metal Machines, Punches. Hendley & Whittemore Co., Beloit, Wis.
Bemis—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Bend-Ezy—Grilles and Registers. Standard Stamping & Perforating Co., Chicago, Ill.
Benda-Vane—Registers. Rock Island Register Co., Rock Island, Ill.
Berloy—Building Products. Berger Mfg. Co., Div. Republic Steel Corp., Canton, Ohio.
Beth-Cu-Loy—Sheets. Bethlehem Steel Co., Bethlehem, Pa.
Bettendorf—Oil Burners. Lennox Furnace Co., Marshalltown, Iowa.
Better-Bilt—Furnaces. Barnes Heating & Ventilating Co., Long Beach, Calif.
BFC—Gas Burners. Moncrief Furnace & Mfg. Co., Dallas, Tex.
B & G—Coils. Bell & Gosset Co., Morton Grove, Ill.
B-H—Building Insulation. Baldwin-Hill Co., Trenton, N. J.
B-Line—Motors. Brown-Brockmeyer Co., Dayton, Ohio.
Bi-Mix—Gas Burners. John Zink Co., Tulsa, Okla.
Bifurcator—Blowers. DeBothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.
Bildrite—Sheathing. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.
Billy Penn—Chimney Caps, Gutter and Accessories, Mouldings and Trim, Pipe, Ventilators. Penn Supply & Metal Corp., Philadelphia, Pa.
Biltwel—Furnaces. Fraser & Johnston Co., San Francisco, Calif.
Birks—Pittsburgh Lock Opener. Bristol Metal Working Equipment, Hartford, Conn.
Bitumastic—Paint. Koppers Co., Inc., Pittsburgh, Pa.
Bituseal—Paint. Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
Black Arrow—Spray Guns and Torches. Black Mfg. Co., Baltimore, Md.
Black Asphalt—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Black Diamond—Built-up Roofing. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Black Lap—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Blazecrete—Refractories. Johns-Manville, New York, N. Y.
Blo-Aire—Blower-Filter Units. Meyer Furnace Co., Peoria, Ill.
Blo-Fan—Fans. Pryne & Co., Inc., Pomona, Calif.
Blodflex—Flexible Hose. American Ventilating Hose Co., New York, N. Y.
Blower Control—Thermostatic Hydraulic Control. White Mfg. Co., St. Paul, Minn.
Blowette—Blower-Filter Units. Lau Blower Co., Dayton, Ohio.
Blu-Blaze—Chimney Caps, Heaters. Tesco, Inc., Tulsa, Okla.
Blu-Cold—Compressors. Lehigh Mfg. Co., Lancaster, Pa.
Blu-Flame—Gas Burners. Vacuum Gas Burner Co., Olean, N. Y.
Blu-Flex—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.
Blue Flame—Gas Conversion Burners. Consolidated Industries, Inc., Lafayette, Ind.
Blue Flame—Rotary Oil Burners. Silent Glow Oil Burner Corp., Hartford, Conn.
Blue-Point—Drills, Tools. Snap-on Tools Corp., Kenosha, Wis.
Blue Ridge—Wire Glass. Libbey-Owens-Ford Glass Co., Toledo, Ohio.
Blue Ring—Conversion Gas Burners. Niagara Motors Corp., Dunkirk, N. Y.

BNCO—Cabinets and Casings. Biersach & Neidermeyer Co., Milwaukee, Wis.
B-N Multi-stage—Oil Burners, Oil Furnaces. Banner-Nawman, Inc., Oakland, Calif.
Bob-Cat—Electric Hoist. Lisbon Hoist & Crane Co., Lisbon, Ohio.
Bonderite—Metal Cleaner. Parker Rust-Proof Co., Detroit, Mich.
Bosmaco—Heating Equipment. Boston Machine Works Co., Lynn, Mass.
Boston Breeze—Oil Burners. Boston Machine Works Co., Lynn, Mass.
Boston Chrome Steel—Baffles. Boston Machine Works Co., Lynn, Mass.
Boston-Standard—Draft Dampers. Boston Machine Works Co., Lynn, Mass.
Boyer—Power Hammers. Chicago Pneumatic Tool Co., New York, N. Y.
Bradford—Water Heaters. Pennsylvania Range Boiler Co., Philadelphia, Pa.
Bransford—Oil Burners. Malleable Iron Fittings Co., Branford, Conn.
Brassweld—Steel Brazing Flux. Sight Feed Generator Co., West Alexandria, Ohio.
Brazarc—Electrodes. Universal Welder Corp., Cleveland, Ohio.
Braze Clad—Silver Clad Sheets. Sherman & Co., Flushing, N. Y.
Brazo—Bronze Soldering Flux. Linde Air Products Co., New York, N. Y.
Breathe-O-Stat—Thermostats. McLarty Systems, Battle Creek, Mich.
Breeze Draftalite—Draft Dampers. Breeze Burners, Inc., Santa Fe, N. M.
Breez-Air—Fans. Buffalo Forge Co., Buffalo, N. Y.
Breezebuilder—Fans. Bar-Brook Mfg. Co., Inc., Shreveport, La.
Breezeo—Kitchen Exhaust Fans. Buffalo Forge Co., Buffalo, N. Y.
Brentwood—Floor Furnaces, Water Heaters. National Appliances, Inc., Pittsburgh, Pa.
Brick-Mix—Plastic Refractory. Chicago Fire Brick Co., Chicago, Ill.
Brilliant—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.
Brilliant Fire—Space Heaters. Ohio Foundry & Mfg. Co., Steubenville, Ohio.
Bronzend—Electrodes. Arcos Corp., Philadelphia, Pa.
Bronzsweld—Cast Iron Brazing Flux. Sight Feed Generator Co., West Alexandria, Ohio.
Bronzoil—Bearings. Dodge Mfg. Corp., Mishawaka, Ind.
Brown—Gas Burners. Sterling Engineering Co., St. Louis, Mo.
Brown Electronik—Humidity and Temperature Recorders. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Brownie—Water Heaters. Brown Steel Tank Co., Minneapolis, Minn.
Brownskin—Waterproof Sheathing Paper. Angier Corp., Framingham, Mass.
Bruin—Roofing Paint. Baer Bros., New York, N. Y.
BTU—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Bu-Pro-Fire—Furnaces, Heaters. Temco, Inc., Nashville, Tenn.
Buckeye—Space Heaters. Ohio Stove Co., Portsmouth, Ohio.
Budget—Water Heaters. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Bulldog—Snips and Shears. Wiss & Sons Co., Newark, N. J.
Bulldog—Shear. Lincoln Machine Co., Boston, Mass.
Bundyweld—Tubing. Bundy Tubing Co., Detroit, Mich.
Bunker Hill—Roofing, Sheets and Solder. Northwest Lead Co., Seattle, Wash.

But-N-tite—Steel Roofing. St. Paul Corrugating Co., St. Paul, Minn.
 Buzzer—Gas Soldering Furnaces. Charles A. Hones, Inc., Baldwin, N. Y.
 B & W—Refractories & Furnace Insulation. Babcock & Wilcox Co., New York, N. Y.
 BX—Oil Burners. Aldrich Co., Wyoming, Ill.

C

C-10—High Temperature Paint. Laclede-Christy Clay Products Co., St. Louis, Mo.
 Cable King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
 California—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.
 Caloric—Furnaces. Marshall Furnace Co., Marshall, Mich.
 Camalloy—Gutters, Fittings, and Conductor Pipe. Campbell Stainless Products Co., Washington, Pa.
 Capillary—Air Conditioning Units. Washers, Filters, Air & Refrigeration Corp., New York, N. Y.
 Capital—Furnaces. Farris Furnace Co., Springfield, Ill.
 Capitolaire—Furnaces. United States Radiator Corp., Detroit, Mich.
 Cara-Flux No. 400—Flux solution. Carajon Chemical Co., Inc., Fremont, Mich.
 Carbolite—Soot Remover. Ampion Corp., Long Island City, N. Y.
 Carbonaire—Oil Burners. Breeze Corps., Inc., Newark, N. J.
 Carburetor-Stoker—Industrial Stokers. Woolley Eng. Co., Detroit, Mich.
 Cardolite—Caulking Compound and Paint. Irvington Varnish & Insulator Co., Irvington, N. J.
 Carex-CPs—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Carey Coating—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Careyclad—Metal Protecting Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Careyduct—Prefabricated Ducts and Fittings. Philip Carey Co., Cincinnati, Ohio.
 Carilloy—Plate. U. S. Steel Co., Pittsburgh, Pa.
 Casco—Flux. Flux-All Chemical Products, New York, N. Y.
 Cast-Refract—Baffles. Quigley Co., Inc., New York, N. Y.
 Castalu—Blower Wheels and Fans. Advance Aluminum Castings Corp., Chicago, Ill.
 Castomatic—Solder. Federated Metals Div., American Smelting and Refining Co., New York, N. Y.
 Caulk-N-Seal—Caulking Compound. Blue Ridge Talc Co., Inc., Henry, Va.
 Caulk-O-Seal—Caulking and Glazing Compounds. Calbar Paint & Varnish Co., Philadelphia, Pa.
 Cauxal—Compounds. X-Pando Corp., Long Island City, N. Y.
 CDC—Bearings and Pulleys. Chicago Die Casting Co., Chicago, Ill.
 Ce-Co—Caulking Compounds & Paints. Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
 C-E Heatmaster—Water Heaters. Combustion Engineering Co., Inc., Chattanooga, Tenn.
 Cecotite—Roofing Paint. Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
 Cell-U-Blanket—Insulation. Masonite Corp., Chicago, Ill.
 Cello-Sponge—Evaporators. Viking Air Conditioning Corp., Cleveland, Ohio.
 Cellufoam—Duct Insulation. Masonite Corp., Chicago, Ill.
 Cementkote—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Cemesto—Duct Boards. Celotex Corp., Chicago, Ill.
 Center-Finder—Protractor. Interstate Sales Co., New York, N. Y.
 Centerflo—Industrial Fans. Holden Fan Co., Detroit, Mich.
 Centri-Merge—Dust Collectors. Schmieg Industries, Inc., Detroit, Mich.
 Centripeller—Ventilating Fans. Paul R. Jordan & Co., Inc., Indianapolis, Ind.
 C-H—Relays, Switches and Valves. Cutler-Hammer, Inc., Milwaukee, Wis.
 Challenger—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
 Challenger—Air Conditioning Units. Great National Air Conditioning Corp., Oklahoma City, Okla.
 Challenger—Circulating Gas Heaters. Independence Stove & Furnace Co., Independence, Mo.
 Challenger—Fans. Signal Electric Mfg. Co., Menominee, Mich.
 Challenger—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.
 Challenger—Stokers. Kol-Master Corp., Oregon, Ill.
 Champion—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.
 Champion—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
 Champion—Water Heaters. Crane Co., Chicago, Ill.
 Cheerfulator—Space Heaters. Adams Bros. Mfg. Co., Inc., Pittsburgh, Pa.
 Chester—Water Heaters. Ajax Thermostatic Controls Co., Gates Mills, Ohio.
 CHFS Co.—Fittings & Accessories. Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
 Chicago—Brakes and Presses. Dreis & Krump Mfg. Co., Chicago, Ill.
 Chicago—Stokers. Eddy Stoker Corp., Chicago, Ill.
 Chicago Steel—Snips and Shears. W. A. Whitney Mfg. Co., Rockford, Ill.
 Chicago-Wrigley—Toggle and Anchor Bolts. Chicago Expansion Bolt Co., Chicago, Ill.
 Chico Brickset—Furnace and Insulating Cement. Refractories. Chicago Fire Brick Co., Chicago, Ill.
 Chief—Electric Drills. Welders. Chicago Precision Machine Co., Chicago, Ill.
 Chieftain—Refrigerating Compressors. Tecumseh Products Co., Tecumseh, Mich.
 Chill Air—Evaporative Coolers, Recirculating Pumps. National Engineering & Mfg. Co., Kansas City, Mo.
 Chine—Metal. Allan Corp., Trenton, N. J.
 Chinook—Heating Coils. Bayley Blower Co., Milwaukee, Wis.
 Chore Boy—Conversion Gas Burner. Standard Fuel Engineering Co., Detroit, Mich.
 Chromend—Electrodes. Arcos Corp., Philadelphia, Pa.
 Chromeweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Chromtrim—Mouldings and Trim. R. D. Werner Co., Inc., New York, N. Y.
 Chronat—Furnace Repairs. National Foundry & Furnace Co., Dayton, Ohio.
 Chronotherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Chrysler-Airtemp—Heating and Cooling Equipment. Airtemp Div., Chrysler Corp., Dayton, Ohio.
 Cibulas—Puttyless Skylights. General Sheet Metal Works, Inc., Bridgeport, Conn.
 Cinch—Expansion Bolts. National Lead Co., New York, N. Y.

Cinco—Windows. R. C. Russell Co., Cleveland, Ohio.
 Cinkote—Paint. Blue Ridge Talc Co., Inc., Henry, Va.
 Cinti—Elbows. Cincinnati Elbow Co., Cincinnati, Ohio.
 Circle T—Switches. Trumbull Electric Mfg. Co., Plainville, Conn.
 Circo—Louvers & Shutters, Circulators & Devices Mfg. Corp., New York, N. Y.
 Circu-Ray—Furnaces, Heaters. Temco, Inc., Nashville, Tenn.
 Circulaire—Wall Furnaces. Hammeel Radiator Eng. Co., Los Angeles, Calif.
 Circulaire—Furnace Fan. Corlett-Turner Co., Chicago, Ill.
 CJB—Bearings. Ahlberg Bearing Co., Chicago, Ill.
 C&L—Soldering Furnaces and Torches. Clayton & Lambert Mfg. Co., Louisville, Ky.
 Clark—Oil Burners. National Oil Burner Co., Brooklyn, N. Y.
 Clason—Snow Guards. M. N. Cartier & Sons Company, Providence, R. I.
 Classic—Heating & Ventilating Registers. Auer Register Co., Cleveland, O.
 Clauss—Snips and Shears. Henkel-Clauss Co., Fremont, Ohio.
 Cleanaire—Blower-Filter Units. Peerless Foundry Co., Indianapolis, Ind.
 Clearview—Oil Tank Gauge. Boston Machine Works Co., Lynn, Mass.
 Cleveland—Burners, Furnaces. Dornback Furnace & Pdy. Co., Cleveland, Ohio.
 Cliffdale—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh, Pa.
 Clifton—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Climate-Changer—Air Conditioning Units. Trane Co., La Crosse, Wis.
 Climate Master—Furnaces. Hess Co., Chicago, Ill.
 Climatrol—Air Conditioning Units, Blower-Filter Units, Furnaces, Conversion Burners, Furnace and Smoke Pipe Fittings, Humidifiers, Registers, Ventilators. L. J. Mueller Furnace Co., Milwaukee, Wis.
 Clincher—Conductor Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
 Clipper—Furnaces. Henderson Furnace & Mfg. Co., Sebastopol, Calif.
 Clipper—Kitchen Exhaust Fans. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
 Clipper—Ventilators. Riggan Metal Products, Inc., Kankakee, Ill.
 CM—Cranes, Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
 CMH—Machine Tool Conduit. Chicago Metal Hose Corp., Maywood, Ill.
 CMW—Stokers, and Water Heaters. Catskill Metal Works, Catskill, N. Y.
 Co-Min-Co—Insulating Cement. United States Mineral Wool Co., South Milwaukee, Wis.
 Colawelding—Flux. Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
 Colbraxing—Flux. Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
 Colcap—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Coldpress—Housings, Commercial Shearing & Stamping Co., Youngstown, Ohio.
 Coldstream—Air Conditioning Units. Baker Ice Machine Co., Inc., South Windham, Me.
 Cole—Draft Governor. Cole-Sewell Engineering Co., Minneapolis, Minn.

Collapso—Furnace Brushes. Flour City Brush Co., Minneapolis, Minn.

Collopakes—Roofing Paint. Samuel Cabot, Inc., Boston, Mass.

Colonial—Blower-Filter, Oil Burners, Furnaces, Humidifiers, Heaters, Stokers. Green Colonial Furnace Co., Des Moines, Ia.

Colonial—Conductor Heads and Fittings. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

Columbia—Air Freshening Compounds. Carbide and Carbon Chemicals Div. Union Carbide & Carbon Corp., New York, N. Y.

Columbia—Furnaces. Sandberg Mfg. Co., Portland, Ore.

Columbia—Insulation. United States Mineral Wool Co., South Milwaukee, Wis.

Columbia—Ventilators. E. E. Souther Iron Co., St. Louis, Mo.

Columbus—Humidifiers. Fred D. Pfening Co., Columbus, Ohio.

Combustioneer—Humidifiers and Stokers. Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.

Comet—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

Comet Exhaustair—Fans and Ventilators. New York Blower Co., Chicago, Ill.

Comfort—Furnaces. May-Fieberger Company, Newark, Ohio.

Comfort-Aire—Gas Burners. Chas. M. Olmstead & Co., Detroit, Mich.

Comfortaire—Furnaces. Hammel Radiator Engineering Co., Los Angeles, Calif.

Comforteer—Space Heaters. Inland Steel Container Co., Chicago, Ill.

Comfortmaster—Furnaces. Thatcher Furnace Company, Garwood, N. J.

Commander—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.

Commander—Furnaces. Peerless Foundry Co., Indianapolis, Ind.

Commander—Furnaces. Round Oak Co., Inc., of Indiana, Dowagiac, Mich.

Compact—Blowers. Bishop & Babcock Mfg. Co., Cleveland, Ohio.

Compact—Oil Burners. Breeze Corp., Inc., Newark, N. J.

Compass—V-Steel—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

Concave—Bearings. Shafer Bearing Corp., Downers Grove, Ill.

Conco-Heat—Furnaces. Conco Engineering Works, Mendota, Ill.

Condor—Belts. Raybestos-Manhattan, Inc., Passaic, N. J.

Coni-Vane—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Conservoil—Oil Burners. Crane Co., Chicago, Ill.

Consolaire—Circulating Heaters. Hammel Radiator Eng. Co., Los Angeles, Calif.

Consolidated—Presses and Dies. E. W. Bliss Co., Canton, Ohio.

Conterflow—Air Conditioning Furnaces. Western Blower Co., Seattle, Wash.

Controlaire—Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Convactor—Furnaces. L. J. Mueller Furnace Co., Milwaukee, Wis.

Convactor—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.

Convertible—Furnaces. Marshall Furnace Co., Marshall, Mich.

Convento—Ventilators. C. L. Ammerman Co., Minneapolis, Minn.

Coolair—Evaporative Cooler Units. Belmetals Mfg. Co., Belmont, Calif.

Coolair—Fans and Ventilators. American Coolair Corp., Jacksonville, Fla.

Cooler-Aire—Air Conditioning Unit. Baltimore Porcelain Steel Corp., Baltimore, Md.

Coolero—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Cool-Flo—Fans. American Metal Products Co., Ft. Worth, Texas.

Cooper-Kote—Sheet Metal Paint. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Cop-R-Loy—Copper Bearing Steel Sheets. Wheeling Steel Corp., Wheeling, W. Va.

Cop-R-Tex—Thru-Wall Flashing. Wasco Flashing Co., Cambridge, Mass.

Copper-Alloy—Sheets. Inland Steel Co., Chicago, Ill.

Copper-Brite—Metal Finishers. Rossaul Co., New York, N. Y.

Copper-Fabric—Flashing. Wasco Flashing Co., Cambridge, Mass.

Coppersal—Flashing. Wasco Flashing Co., Cambridge, Mass.

Copperskin—Waterproof sheathing paper. Angier Corp., Framingham, Mass.

Cor Ten—Steel Plates. Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

Corinco—Insulation. Cork Insulation Co., Inc., New York, N. Y.

Corkboard—Insulation. Armstrong Cork Co., Lancaster, Pa.

Corkboard—Insulation. Mundet Cork Corp., Brooklyn, N. Y.

Corozone—Ozone Apparatus. Corozaire Heater Corp., Cleveland, Ohio.

Corvette—Water Heaters. Security Mfg. Co., Kansas City, Mo.

Cottrell Process—Collectors. Western Precipitation Corp., Los Angeles, Calif.

Counterflo—Direct Fired Heaters. Dravo Corp., Pittsburgh, Pa.

Cozy—Furnaces. Advance Furnace Co., Wichita, Kans.

CP—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

Crane Basmor—Furnaces. Bastian-Morley Co., Inc., LaPorte, Ind.

Crane-Line—Burners. Fans, Furnaces, Water Heaters, Stokers. Crane Co., Chicago, Ill.

Crary's—Cut-Offs. Galvan Mfg. Co., New Albany, Ind.

Crescent—Furnaces. Green Colonial Furnace Co., Des Moines, Ia.

Crest—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Crestoloy—Tools. Crescent Tool Co., Jamestown, N. Y.

Cristorch—Welding Torch. Hamilton Tool Co., Hamilton, Ohio.

Cromaloy—Stainless Soldering Flux. Linde Air Products Co., New York, N. Y.

Crown—Torches. Sully Engineering, Ltd., Los Angeles, Calif.

Crown Heat King—Gas Conversion Burner. B. G. B. Mfg. Co., Dearborn, Mich.

Crusader—Oil Burners. Bethlehem Fdry. & Mach. Co., Bethlehem, Pa.

Crystal—Paints. Hilo Varnish Corp., Brooklyn, N. Y.

Cupromatic—Electric Water Heaters. Cupromatic Mfg. Corp., Corona, N. Y.

Custom-Aire—Furnaces and Heaters. Heating Equipment Mfg. Co., San Francisco, Calif.

Cyclone—Drill-bits. New England Carbide Tool Co., Cambridge, Mass.

Cyclone—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

D

Da-Nite Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Dapoblu—Gas Burners. Beck Engineering Combustion Company, St. Louis, Mo.

Dasco—Punches, Tools. Damascus Steel Products Corp., Rockford, Ill.

Day-Steel—Pulleys. Dayton Rubber Co., Dayton, Ohio.

Dayton Thorobred—V-Belts. Dayton Rubber Co., Dayton, Ohio.

D & D—Hole Cutter. N. J. Frayn Co., Redwood City, Calif.

De-Sua-Co—Blower Housings and Stampings. Detroit Stamping Co., Detroit, Mich.

Deco-Shingles—Metal Shingles. Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.

Decoseal—Paints. Debevoise Co., Brooklyn, N. Y.

Defender—Oil Burners. Silent Glow Oil Burner Corp., Hartford, Conn.

Defecto—Grilles. U.S. Air Conditioning Corp., Minneapolis, Minn.

Defectrol—Duct Turning Vanes. Barber-Colman Co., Rockford, Ill.

Dehydratone—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.

Deion—Time Switches. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Delco-Heat—Oil Burners and Furnaces. Delco Appliance Div., General Motors Corp., Rochester, N. Y.

Delde—Power Roll Forming. Doelger & Kirsten, Inc., Milwaukee, Wis.

Delphos—Ridge Roll and Roofing. New Delphos Mfg. Co., Delphos, Ohio.

Deoxidize—Metal Protecting Paint. American Chemical Paint Co., Ambler, Pa.

Dereka—Paint. Debevoise Co., Brooklyn, N. Y.

Desert Air—Burners and Furnaces. Central States Mfg. Co., Inc., Arkansas City, Kans.

Desert Ray—Furnaces and Heaters. Hirsch Mfg. Co., Garland, Texas.

Desomatic—Dehumidifiers. Daly, Merritt & Sullivan, Inc., Falls Church, Va.

Detroit LoStoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Detroit Roto Grate Stoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Detroit RotoStoker—Overfeed Spreader Stoker. Detroit Stoker Co., Detroit, Mich.

Detroit UniStoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Dexter Heat Valve—Ventilators. Swartwout Co., Cleveland, Ohio.

DFC—Insulating Cement. Denver Fire Clay Co., Denver, Colo.

Di-Acro—Precision Machines. O'Neil-Irwin Mfg. Co., Lake City, Minn.

Dial—Damper Regulator. Martens & Stormoen Co., Boston, Mass.

Dial—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.

Diamond—Caulking Compounds, Paint. Thompson & Co., Oakmont, Pa.

Diamond—Smoke Pipe Dampers. Adams Co., Dubuque, Iowa.

Diamond—Water Heaters. A. Y. McDonald Mfg. Co., Dubuque, Iowa.

Diamond H—Controls, Switches. Hart Mfg. Co., Hartford, Conn.

Dickinson—Ventilators. Aeolus Dickinson, Chicago, Ill.

Dickrope—V-Belts. R. & J. Dick Co., Passaic, N. J.

Directrol—Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Divco—Tinning Baths, Brushes, Flashing, Flux, Sheets, Solder. Division Lead Co., Chicago, Ill.

Dixie—Water Heaters, Hotstream Heater Co., Cleveland, Ohio.

Dixie Bell—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.

Dixie Star—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.

Do-All—Hammer. Wadock Electric Tool Corp., Chicago, Ill.

Dodge-Timken—Bearings. Dodge Mfg. Corp., Mishawaka, Ind.

Domestigas—Gas Conversion Burners. Thermex Engineering Co., Chicago, Ill.

Do-Mor—Adj. Keyhole Saw. Pioneer Tool Co., Racine, Wis.

Dorex—Odor Absorbers. W. B. Connor Eng. Corp., New York, N. Y.

Double Diamond—Psychrometers, Relays, Switches, Thermometers. H-B Instrument Co., Philadelphia, Pa.

Double-Duty—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Double-Seal—Humidifier Fittings. Hays Mfg. Co., Erie, Pa.

Douglas—Furnaces, Stokers. Omaha Stove Repair Works, Inc., Omaha, Neb.

Dover—Conductor Fittings. Ohio Wire Products Co., Dover, Ohio.

DovRloy—Sheets. Reeves Steel & Mfg. Co., Dover, Ohio.

Downmetal—Plates, Sheet, Light Weight Shapes, Welding Rod. Dow Chemical Co., Midland, Mich.

Downflame—Gas-Oil Burners, Floor Furnaces. United Air Heaters, Inc., Seattle, Wash.

Downflo—Highboy Furnaces. United Air Heaters, Inc., Seattle, Wash.

Draft-A-Justor—Barometric Dampers. Preferred Utilities Mfg. Corp., New York, N. Y.

Draft Korektor—Damper. Cole-Sewell Engineering Co., Minneapolis, Minn.

Draft-O-Star—Barometric Dampers, Hotstream Heater Co., Cleveland, Ohio.

Drafter—Gravity Furnace Control Systems. Penn Electric Switch Co., Goshen, Ind.

Drafrite—Draft Gages. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

Dri-Air—Dehumidifiers. Tamms Industries Inc., Chicago, Ill.

Dri-N-Tite—Roof Cement. A. C. Horn Co., Inc., Long Island City, N. Y.

Drifilter—Filters. American Air Filter Co., Inc., Louisville, Ky.

Dri-Lap—Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.

Drive-it—Power Hammers, Powder Power Tool Corp., Portland, Ore.

Drivall—Waterproofing Compound. Glidden Co., Cleveland, Ohio.

Drouvelite—Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.

Dry Kiln—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Dual-A-Fire—Gas-Oil Combination Burners and Furnaces. Automatic Firing Corp., St. Louis, Mo.

Dual-Clone—Blow Pipe Collectors. Day Co., Minneapolis, Minn.

Dual-Dial—Tank Gauge. Rochester Mfg. Co., Rochester, N. Y.

Dual-Matic—Gas-Oil Combination Burners. J. C. Junior Co., Kansas City, Mo.

Dualvent—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.

Dubbsal—Sheeting. Masonite Corp., Chicago, Ill.

Duclean—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Duco—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.

Ducon—Controls, Soldering Coppers. Dual Remote Control Co., Garden City, Mich.

Duct Soundliner—Duct Insulation. Baldwin-Hill Co., Trenton, N. J.

Ductboard—Prefabricated Ducts. Sall Mountain Co., Chicago, Ill.

Ducti-Linx—Connectors, Tubing. Gray-Wilson Co., Detroit, Mich.

Ducturns—Vanes. Tuttle & Bailey, Inc., New Britain, Conn.

Ductype—Fans. South Bend Air Products, Inc., South Bend, Ind.

Dukrome—Metal Protecting Paint. E. I. du Pont de Nemours & Co., Wilmington, Del.

Dul-Kote—Galv. Steel Sheets. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Dulux—Enamels, Lacquers and Paints. E. I. du Pont de Nemours & Co., Wilmington, Del.

Duo-Gyrovan—Fans. Dual-Air Fan Corp., South Elgin, Ill.

Duo-Lock—Pittsburgh Lock Formers. Riverside Machinery Co., Minneapolis, Minn.

Dura-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.

Dura-Line—Heating & Ventilating Registers. Auer Register Co., Cleveland, Ohio.

Dura-Sheen—Flues and Roof Jacks. Baltimore Porcelain Steel Corp., Baltimore, Md.

Dura-Bilt—Gravity Registers. Auer Register Co., Cleveland, Ohio.

Duralad—Water Heaters. A. O. Smith Corp., Milwaukee, Wis. and Toledo, Ohio.

Duraflax—Stokers. Canton Stoker Corp., Canton, Ohio.

Duralite—Refractories. Chicago Fire Brick Co., Chicago, Ill.

Duranite—Paint. Atlas Powder Co., North Chicago, Ill.

Duridine—Chemical Cleaner. American Chemical Paint Co., Ambler, Pa.

Duronze—Plates and Sheets. Bridgeport Brass Co., Bridgeport, Conn.

Dust Arrester—Dust and Lint Collectors. American Air Filter Co., Inc., Louisville, Ky.

Dustkop—Dust Collectors. Agat-Detroit Co., Ann Arbor, Mich.

DustStop—Filters. Owens-Corning Fiberglas Corp., Toledo, Ohio.

Dutch Boy—Paints, Solder. National Lead Co., New York, N. Y.

Dux-Sulation—Duct Insulation. Grant Wilson, Inc., Chicago, Ill.

Dynaflo—Blowers and Fans. South Bend Air Products, Inc., South Bend, Ind.

Dynetric—Balancing Equipment. Gisholt Machine Co., Madison, Wis.

E

Eagle Star—Solder. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Super—Flashing. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Super "66"—Furnace Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Super temp—Duct Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Easternoil—Oil Burners. Eastern Oil & Equipment Co., Portland, Me.

Easy-Flo—Solder. Handy & Harman, New York, N. Y.

Easy-Slip—Gutters. La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.

Easyweld—Electrodes. Universal Welder Corp., Cleveland, Ohio.

E. C. Cord—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

Echo—Ceiling Ventilators. Elgo Shutter & Mfg. Co., Detroit, Mich.

Eclipse—Refrigerating Compressors. Frick Co., Waynesboro, Pa.

Eclipse—Gas Pressure Regulating Valves. Illinois Engineering Co., Chicago, Ill.

Econo-miser—Oil Burners. Green Colonial Furnace Co., Des Moines, Iowa.

Econocol—Stokers. Cotta Transmission Co., Rockford, Ill.

Economite—Gas Burners. Mid-Continent Metal Products Co., Chicago, Ill.

Economy—Power Hack Saws. F. L. Robertson, Buffalo, N. Y.

Economy—Furnaces, Heaters. International Heater Co., Utica, N. Y.

Economy—Gas Burners. H-P Products, Louisville, Ohio.

Economy—Adjustable Buffing Hoods. Kirk & Blum Mfg. Co., Cincinnati, Ohio.

Economy—Ventilators. Arax Company, Chicago, Ill.

Economy—Brakes, Squaring Shears. Acme Equipment Co., Inc., Chicago, Ill.

Economy—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Edgeseal—Filters. Wilson & Co., Inc., Chicago, Ill.

Effico—Ventilators. Hirschman-Pohle Co., LeRoy, N. Y.

Effico Louver—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

EFM—Burners, Furnaces, and Stokers. Electric Furnace-Man, Inc., Emmaus, Pa.

Elastic—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Elastikote—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Elasto-Rib—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.

Elcon—Stationary Louvers. Elgo Shutter & Mfg. Co., Detroit, Mich.

Electreat—Furnaces. Northwest Heating, Inc., Portland, Ore.

Electric Aire—Furnaces. Gray & Dudley Co., Nashville, Tenn.

Electric City—Gutter Forming Machines. F. L. Robertson, Buffalo, N. Y.

Electric Janitor—Draft Damper Motors, Hand Fired Control Systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Electromatic—Solenoid Valves. Jas. P. Marsh Corp., Skokie, Ill.

Electro-Cell—Filters. American Air Filter Co., Inc., Louisville, Ky.

Electro-Flux-Stik—Soldering Flux. Lake Chemical Co., Chicago, Ill.

Electro Hot—Water Heaters. Red Spot Electric Co., Tacoma, Wash.

Electro-Matic—Filters. American Air Filter Co., Inc., Louisville, Ky.

Electro-Mist—Oil Mist and Smoke Collector. American Air Filter Co., Inc., Louisville, Ky.

Electro-PL—Filters. American Air Filter Co., Louisville, Ky.

Electro-Sheet—Roofing. American Brass Co., Waterbury, Conn.

Electro-Valve—Solenoid Valves. Sciaky Bros., Inc., Chicago, Ill.

Electro-Wind—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Electroflo—Solenoid Valves. Hays Mfg. Co., Erie, Pa.

Electrolaire—Air Conditioning Furnaces. Electrol Burner Mfg. Co., Rutherford, N. J.

Electromaze—Electrostatic Filters. Air-Maze Corp., Cleveland, Ohio.

Electrumite—Stainless Steel and Nickel Tubing. Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.

Electronide—Steel and Stainless Steel Tubing. Republic Steel Corp., Cleveland, Ohio.

Elgin—Louvers and Shutters. Elgo Shutter & Mfg. Co., Detroit, Mich.

Elgin—Pneumatic Hammers, Brazing Torches and Welders. Borm Mfg. Co., Elgin, Ill.

Elite—Gravity Registers. Auer Register Co., Cleveland, Ohio.

Elso—Motors. Electric Sprayit Co., Sheboygan, Wis.

Elvanayre—Gas Burners. J. E. Van Tuyl & Associates, Cleveland, Ohio.

EM—Motors. Electric Machinery Mfg. Co., Minneapolis, Minn.

EMC—Motors. Electric Motor Corp., Racine, Wis.

Empire—Mallets. Greene, Tweed & Co., North Wales, Pa.

Empire—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Enamelclad—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Enduro—Stainless Steel Sheets. Republic Steel Corp., Cleveland, Ohio.

Epo—Perforated Metals. Erdle Perforating Co., Rochester, N. Y.

EPCO—Welding Timer. Electronic Products Co., Geneva, Ill.

Era—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.

Era Exl-Air—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.

Eroduct—Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.

Esco—Smoke Pipe Dampers. Eselgroth & Co., Newark, N. J.

Esico—Electric Soldering Coppers. Electric Soldering Iron Co., Inc., Deep River, Conn.

Esso—Furnaces, Oil Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.

Eternit—Non-Metallic Sheets. Ruberoid Co., New York, N. Y.

Eternum—Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Eutec Arc—Arc Welders. Eutectic Welding Alloys Corp., New York, N. Y.

EutecRods—Welding Rods. Eutectic Welding Alloys Co., New York, N. Y.

Eutector—Flux. Eutectic Welding Alloys Co., New York, N. Y.

EutecTodes—Electrodes. Eutectic Welding Alloys Co., New York, N. Y.

Evco—Barometric Draft Controls. Empire Ventilation Equipment Co., Long Island City, N. Y.

Even-Temp—Furnaces. Northwest Metal Products, Inc., Seattle, Wash.

Everdur—Plates, Sheets, Electrodes. Welding Rod. American Brass Co., Waterbury, Conn.

Everedy—Oil Burners. Mt. Hawley Mfg. Co., Peoria, Ill.

Everjet—Roofing Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Everlasting—Fastenings. H. M. Harper Co., Morton Grove, Ill.

Everplastic—Paint. H. H. Robertson Co., Pittsburgh, Pa.

Ex-Lite—Tin Plate Steel Sheets. Republic Steel Corp., Cleveland, Ohio.

Exidust—Dust Collectors. Allen Billmyre Div., Lamson Corp., Syracuse, N. Y.

E-Z Arc—Arc Welders. Will-Weld Mfg. Co., Omaha, Neb.

E-Z Dux—Fiberglass Duct Connections. St. Clair Rubber Co., Marysville, Mich.

E-Z-Hung—Eaves Trough and Gutters. Riggan Metal Products, Inc., Lansing, Mich.

E-Z-On—Damper Clips and Tips, Damper Regulators. M. A. Gerett Corp., Milwaukee, Wis.

EZ Wash—Air Filters. Continental Air Filters, Inc., Louisville, Ky.

F

F Electric—Fan Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Fabricote—Waterproofing. Wasco Flashing Co., Cambridge, Mass.

Fabrikated—Faces, Grilles, Registers. Independant Register Co., Cleveland, Ohio.

Faceweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Fairweather—Blower-Washer Units. Furblo Co., Hermansville, Mich.

Falco—Sheets. Fairmont Aluminum Co., Fairmont, W. Va.

Fan-Pac—Night Air Cooling Fans. De Boethaz Fans Div., American Machine & Metals, Inc., East Moline, Ill.

Far-Air—Evaporative Coolers, Filters. Farr Co., Los Angeles, Calif.

Farco—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.

Fargail—Soldering Flux. Farrelloy Co., Philadelphia, Pa.

Farsol—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.

F & E—Underfeed Stokers. Flynn & Emrich Co., Baltimore, Md.

Featherlin—Coils. L. J. Wing Mfg. Co., New York, N. Y.

Federal—Refractories. U. S. Stoneware Co., Akron, Ohio.

Felt-Cote—Steel Roofing. American Steel Band Co., Pittsburgh, Pa.

Feltes—Roofing Felt. Philip Carey Co., Cincinnati, Ohio.

Fenestra—Heat Insulating Windows. Detroit Steel Products Co., Detroit, Mich.

Fenn's Rotary—Roof Ventilators. Waverly Heating Supply Co., Boston, Mass.

Ferro—Soldering Flux. Linde Air Products Co., New York, N. Y.

Ferro-Therm—Reflective Insulation. American Flange & Mfg. Co., Inc., New York, N. Y.

Ferroboard—Steel Roofing. Truscon Steel Co., Youngstown, Ohio.

Ferroweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Fibercone—Roofing Paint. Midland Paint & Varnish Co., Cleveland, Ohio.

Fiberglas—Insulation. Owens-Corning Fiberglas Corp., Toledo, Ohio.

Fiberkote—Roofing Cement. National Mfg. Corp., Tonawanda, N. Y.

Fiberock—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Fibre Coating—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Fibronized—Plastic Tubing. Irvington Varnish & Insulator Co., Irvington, N. J.

Fit-Thru—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.

Filtered Aire—Blower-Filter. American Foundry & Furnace Co., Bloomington, Ill.

Filterpure—Coils. Betz Corp., Hammond, Ind.

Fin-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.

Findlay—Stokers. Central Rubber & Steel Corp., Findlay, Ohio.

Finnente—Conversion Gas Burner. Jerry Finn Engineers, St. Paul, Minn.

Fire Ball—Gas Burners. Johnson Gas Appliance Co., Cedar Rapids, Iowa.

Fire Boy—Conversion Burners. Moore Equipment Co., Lincoln, Neb.

Fire Chief—Oil Burners. Coal-O-Matic Co., Trucksville, Pa.

Fire-Crest—Conversion Burners. Modern Controls Corp., Detroit, Mich.

Fire-Guard—Stokers. Eddy Stoker Corp., Chicago, Ill.

Fire-Hearth—Castable Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.

Fire Tender—Stokers. Holcomb & Hoke Mfg. Co., Indianapolis, Ind.

Firebox—Combustion Chambers. Sid Harvey, Inc., Valley Stream, N. Y.

Firecrete—Refractories. Johns-Manville, New York, N. Y.

Fireite—Cement. Johns-Manville, New York, N. Y.

Fireline—Furnace Firepot Lining. Fireline Stove & Furnace Lining Co., Chicago, Ill.

Firelite—Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.

Firma—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Firomatic—Fuel Oil Filters, Oil Burner Fittings, Tank Gauges. Morse-Smith-Morse, Inc., Watertown, Mass.

Flitrite—Conductor, Eaves Trough and Gutter Fittings and Accessories, Skylight Lifts, Snow Guards. David Levow, or Rival Strap Corp., New York, N. Y.

Fixit—Roof Cement. National Mfg. Corp., Tonawanda, N. Y.

Flame Control—Oil Burners. Richfield Mfg. Corp., New Rochelle, N. Y.

Flame-Otrol—Controls. Wheelco Instruments Co., Chicago, Ill.

Flash-Off No. 99—Industrial Finish. Acme White Lead & Color Works, Detroit, Mich.

Flash-Rite—Flashing. Figge Co., Chicago, Ill.

Flat-Top—Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.

Flatjet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.

Flatpak—Prefabricated Ducts and Fittings. Viking Mfg. Corp., Cleveland, Ohio.

Fleet Arc—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.

Fleetweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

Fleur de Lis—Conductor Heads and Fittings. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

Flex-Tube—Draft Gauges. F. W. Dwyer Mfg. Co., Chicago, Ill.

Flexarc—Arc Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Flexaust—Hose. American Ventilating Hose Co., New York, N. Y.

Flexiblac—Paint. Samuel Cabot, Inc., Boston, Mass.

Flextop—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Flint—Gas Burners. Roberts Mfg. Co., Flint, Mich.

Flo-Co—Furnaces and Gas Burners. Floral City Heater Co., Monroe, Mich.

Flo-Matic—Stokers. American Coal Burner Co., Chicago, Ill.

Flo-Warm—Gas Burners. Furnaces. Williamson Heater Co., Cincinnati, Ohio.

Floor-O-Lator—Furnaces. Northwest Metal Products, Inc., Seattle, Wash.

FloRite—Air Velocity Meters. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

Florite Desiccant—Dehumidifier. Floridin Co., Warren, Pa.

Flosol—Soldering Flux. American Chemical Paint Co., Ambler, Pa.

Flowing Heat—Furnaces. Sam Daniels Mfg. Co., Inc., Hardwick, Vt.

Flualyzer—Portable CO Analyzer. Chas. Englehard, Inc., East Newark, N. J.

Fluresal—Waterproofing. American Fluoresit Co., Cincinnati, Ohio.

Fluretex—Waterproofing. American Fluoresit Co., Cincinnati, Ohio.

Flux-Stick—Soldering Flux. Lake Chemical Co., Chicago, Ill.
 Fluxite—Flux. National Lead Co., New York, N. Y.
 Foamglas—Insulation. Pittsburgh Plate Glass Co., and Pittsburgh Corning Corp., Pittsburgh, Pa.
 Follansbee—Furnace Pipe. Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.
 Fontoteat—Floor Furnaces. Sunshine Mantle Co., Chanute, Kans.
 Forbes Syphonair—Ventilators. Western Engineering & Mfg. Co., Los Angeles, Calif.
 Forster—Gas Burners. Ransome Co., Emeryville, Calif.
 Fosco Standard—Water Heaters. F. O. Schoedinger, Columbus, Ohio.
 Fosco Thermoray—Gas Space Heaters. F. O. Schoedinger, Columbus, Ohio.
 4-Way-Flow—Registers. U. S. Register Co., Battle Creek, Mich.
 Fracto-Crete—Castable Refractories. Ramtite Co., Chicago, Ill.
 Free-Aire—Air Conditioning Units, Furnaces, Heaters. Kehm Corp., Chicago, Ill.
 Free Flow—Ventilators. Burt Mfg. Co., Akron, Ohio.
 Freeman—Stokers. Illinois Iron & Bolt Co., Chicago, Ill.
 Fresh-Air Maker—Fans. Schwitzer-Cummings Co., Indianapolis, Ind.
 Frigid—Fans, Blowers, Housings. Circulators & Devices Mfg. Corp., New York, N. Y.
 Fro-T-Aire—Evaporative Coolers. Palmer Mfg. Corp., Phoenix, Arizona.
 Frost-O-Lite—Paint. Savin Chemical Products Co., Moline, Ill.
 Fuel-Saver—Automatic Draft Regulator. Walker Mfg. & Sales Corp., St. Joseph, Mo.
 Fuel-Tone—Oil Burner Tank Solvent. Radiator Specialty Co., Charlotte, N. C.
 Fueltrol—Oil Burners, Furnaces and Stokers. Premium Coal & Oil Co., Cincinnati, Ohio.
 Fueltone—Oil Tank Solvent. Ampion Corp., Long Island City, N. Y.
 Fulflo—Fuel Oil Filter. Commercial Filters Corp., Boston, Mass.
 Fulljet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
 Fulscope—Control Systems. Taylor Instrument Co., Rochester, N. Y.
 Fulton—Register Shield. Patent Novelty Co., Fulton, Ill.
 Furnacestat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Fuseair—Diffusers. Aladdin Heating Corp., Oakland, Calif.
 Fyr-Feeder—Stokers. American Coal Burner Co., Chicago, Ill.
 Fyr-Fly—Oil Burners. Breeze Corps., Inc., Newark, N. J.
 Fyre-Mortar—Insulating Cement. Quigley Co., Inc., New York, N. Y.
 Fyrite—CO₂ Analyzers. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

G

Galbestos—Roofing. H. H. Robertson Co., Pittsburgh, Pa.
 Galonage—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.
 Galv-Kote—Zinc Paint. Geo. H. Ohmer Co., Dayton, Ohio.
 Galv-O-Zinc—Coating, Paint. Blue Ridge Talc Co., Inc., Henry, Va.
 Galvaprep—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Gas-a-Fire—Gas Conversion Burners, Gas Furnaces. Automatic Firing Corporation, St. Louis, Mo.
 Gas Economy—Furnaces. International Heater Co., Utica, N. Y.
 Gas Mixer—Furnaces. Floral City Heater Co., Monroe, Mich.
 Gas-Vac—Furnaces, Heaters. Vacuum Gas Appliances, Div. Union Fork & Hoe Co., Rome, N. Y.
 Gasmaster—Conversion Burners and Furnaces. Twin City Gas Specialty Co., Minneapolis, Minn.
 Gasweld—Soldering Coppers and Torch- es, Soldering Flux, Welding Rods. Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
 G. B. C.—Blowers and Fans. General Blower Co., Inc., Philadelphia, Pa.
 G/C—Controls. General Controls Co., Glendale, Calif.
 G-E—Air Conditioning Units, Oil Burners, Heating and Cooling Coils, Compressors, Air Conditioning Furnaces. General Electric Co., Bloomfield, N. J.
 G-E—Controls, Soldering Coppers, Welding Electrodes, Motors, Transformers, Welders. General Electric Co., Schenectady, N. Y.
 G-E—Germicidal Lamps. General Electric Co., Cleveland, Ohio.
 Gehl—Stokers. Eddy Stoker Corp., Chicago, Ill.
 Gemaco—Compressors. General Machinery Co., Spokane, Wash.
 Gemco—Air Conditioner. General Engineering & Mfg. Co., St. Louis, Mo.
 Gemware—Hygrometers. Psychrometers, Thermometers. G. M. Mfg. Co., New York, N. Y.
 General—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.
 Genoco—Oil Burners. General Oil Heating Corp., West New York, N. J.
 Germicidal—Sterilizing Lamp. General Electric Co., Cleveland, Ohio.
 Gerotor—Fuel Oil Pumps. May Oil Burner Div., Gerotor May Corp., Baltimore, Md.
 Giant—Oil Burners. Breeze Corps., Inc., Newark, N. J.
 Gibraltar—Furnaces and Heaters. McGill Foundry & Furnace Co., Bloomington, Ill.
 Gil Governoret—Gas Pressure Regulating Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
 Gilbarco—Furnaces, Oil Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.
 Gilbert—Combustion Chambers. R. Rehm, St. Albans, N. Y.
 Gilco—Water Heaters. J. L. Gillen Co., Dowagiac, Mich.
 Gil Nohum—Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
 Gilsalume—Paint. United Gilsonite Laboratories, Scranton, Pa.
 Gilt Edge—Furnaces, Stokers. Schwab Furnace Co., Milwaukee, Wis.
 Gipsy—Circulating Gas Heaters. Independence Stove & Furnace Co., Independence, Mo.
 Gladiator—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
 Glasfab—Roofing Felt. Lexington Supply Co., Cleveland, Ohio.
 Glazola—Caulking Compounds. Nebel Mfg. Co., Cleveland, Ohio.
 Globe—Sheets. Newport Rolling Mill Co., Newport, Ky.
 Globe Sizzler—Hot Water Coils. Globe Machinery & Supply Co., Des Moines, Iowa.
 Glo-Cone—Gas Burners. Geisel Mfg. Co., Elyria, Ohio.

Glo-Fyr—Oil Burners. Breeze Corps., Inc., Newark, N. J.
 Glowax—Gas Burners. J. O. Martin Co., Inc., San Francisco, Calif.
 Gnome—Oil Burners. Breeze Corps., Inc., Newark, N. J.
 Go-Eze—Damper Regulators. Severson Mfg. & Supply Co., Milwaukee, Wis.
 Gohi—Conductor Pipe, Gutters, Fittings and Accessories. Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.
 Gohi—Sheets. Newport Rolling Mill Co., Newport, Ky.
 Gold Bond—Insulation. National Gypsum Co., Buffalo, N. Y.
 Gold Bond-Gimco—Rock Wool Products, Insulating Cement. National Gypsum Co., Buffalo, N. Y.
 Gordon Spreader-Flame—Gas and Gas-Oil Burners and Furnaces. Roberts-Gordon Appliance Corp., Buffalo, N. Y.
 G-R—Welders. Glenn-Roberts Co., Oakland, Calif.
 Gradutrol—Pneumatic Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Grand Rapids—Furnace Cleaner. Doyle Vacuum Cleaner Co., Grand Rapids, Mich.
 Granodine—Coating Process. American Chemical Paint Co., Ambler, Pa.
 Graylite—Building and Duct Insulation. Insulate Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
 Greastop—Filters. Air-Maze Corp., Cleveland, Ohio.
 Grid—Heating and Cooling Coils. D. J. Murray Mfg. Co., Wausau, Wis.
 Grillometer—Direct Reading Air Velocity Meter. Detroit Air Conditioning Service Co., Inc., Detroit, Mich.
 Gun-Grip—Electric Soldering Iron. Lenk Mfg. Co., Boston, Mass.

H

Hacker—Blowers, Furnaces. Standard Heating Equipment Co., Waterloo, Iowa.
 Hair Glass—Filters. H. J. Somers, Inc., Detroit, Mich.
 Hallmark—Furnaces, Heating Specialties Co., Baltimore, Md.
 Hallowel—Cabinets and Casings. Standard Pressed Steel Co., Jenkintown, Pa.
 Hammer-Sets—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
 Handi-Heat—Soldering Furnaces, Torch- es. Met Sales & Mfg. Co., Rockford, Ill.
 Handlead—Lead Roofing Sheets. National Lead Co., New York, N. Y.
 Handnib—Punches. National Machine Tool Co., Racine, Wis.
 Handy—Pipe, Prefabricated Ducts, Fittings. F. Meyer & Bro. Co., Peoria, Ill.
 Handy-Flux—Soldering Flux. Handy & Harman, New York, N. Y.
 Happy Thought—Heaters. Pittston Stove Co., Pittston, Pa.
 Hardlead—Lead Roofing. National Lead Co., New York, N. Y.
 Hardweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Hart—Oil Burners. Avery Farm Machinery Co., Peoria, Ill.
 Hart-Heat—Furnaces. Avery Farm Machinery Co., Peoria, Ill.
 Hartford-Lincoln—Shear. Lincoln Machine Co., Boston, Mass.

Haylo-Heaters. Frank D. Davison, Inc., Los Angeles, Calif.
H-B-Gas Conversion Burner. Handley Brown Heater Co., Jackson, Mich.
H&C-Furnace Chain, Damper Clips, Dampers, Ceiling Ventilators, and Registers and Grilles. Hart & Cooley Mfg. Co., Holland, Mich.
Health-Air-Blowers, Coils, Fans, Louvers, Shutters and Ventilators. Johnson Fan & Blower Corp., Chicago, Ill.
Hearth-Glo-Space Heaters. Jackson-Evans Mfg. Co., St. Louis, Mo.
Heat-Aid-Furnace Linings. Pyrolite Products Co., Cleveland, Ohio.
Heat Breaker-Fans. Warren Earl Co., Houston, Texas.
Heat Holder-Baffles. Sid Harvey, Inc., Valley Stream, N. Y.
Heat-O-Meter-Time Switch Heat Controls. Miller-Harris Instrument Co., Milwaukee, Wis.
Heat-Pak-Oil Burners. Breeze Corps, Inc., Newark, N. J.
Heat-Pak-Oil Burners, Water Heaters. Aldrich Co., Wyoming, Ill.
Heat Reclaimer-Heat Savers. C. L. Rayfield Co., Chicago, Ill.
Heat-Rem-Aluminum Paint. Speco, Inc., Cleveland, Ohio.
Heat-Rite-Gravity Registers. Auer Register Co., Cleveland, Ohio.
Heat Seal-Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Heatmaster-Oil Burners. Cooper & Cooper, Inc., Pittsfield, Mass.
Heatmaster-Floor Furnaces. Universal Metal Products, Alhambra, Calif.
Heatrola-Heaters. Estate Heatrola Div., Noma Electric Corp., Hamilton, Ohio.
Heatwell-Gas Burners. Maxwell Inc., Denver, Colo.
Heavy-duty-Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.
Heet-Master-Kettles. Aeroil Products Co., Inc., South Hackensack, N. J.
Heliite-Refractories. Johns-Manville, New York, N. Y.
Helyx-Drive Screws, Nails. Hillwood Mfg. Co., Cleveland, Ohio.
Herco-Welders, Transformers. Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Heresite-Pipe and Fittings. Heremetal Co., Minneapolis, Minn.
Hermetic-Furnaces. Favorite Mfg. Co., Piqua, Ohio.
Hev-E-Oil-Oil Burners. Cleaver-Brooks Co., Milwaukee, Wis.
Hewikote-Welding Electrodes. Universal Welding Corp., Cleveland, Ohio.
Heavy-Duty-Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
Hiawatha-Bearings. Ideal Products Co., Oshkosh, Wis.
Hi-Degree-Paint. Cheesman-Elliott Co., Inc., Brooklyn, N. Y.
Hi-Duty-Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.
Hi-Duty-Combustion Chambers. Monogram Products Co., Philadelphia, Pa.
Hi Heat-Gas Burners. Hansen Electric Co., San Francisco, Calif.
Hi-Heat Gray-Paint. Wailes Dove-Hermiston Corp., Westfield, N. J.
Hi-Power-Buffers, Grinders, Drills. Portable Electric Tools, Inc., Chicago, Ill.
Hi-Speed-Electric Dimpler. York Electric Tool Co., York, Pa.
Hi-Speed-Nibblers, Slitters, Shears. Libert Machine Co., Green Bay, Wis.
Hi-Speed-Welding and Cutting Apparatus. Dockson Corp., Detroit, Mich.

Hi-Spr-Spray Nozzles. Thermal Industries, Indio, Calif.
Hi-Steel-Alloy Steel. Inland Steel Co., Chicago, Ill.
Hicycle-Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
High-Duty-Humidifier Valves. Maid-O-Mist, Inc., Chicago, Ill.
High-Ten-No. 500-Flux. Industrial Service Laboratories, Milwaukee, Wis.
Hilume-Aluminum Paint. Hilo Varnish Corp., Brooklyn, N. Y.
H&K-Perforated Metals. Harrington & King Perforating Co., Chicago, Ill.
H-M-Gas Pressure Regulating Valves. Thermac Co., Los Angeles, Calif.
H&M-Gas Burners. Hook & Miller, Pittsburgh, Pa.
Hoffman-Storage Water Heaters. Clayton & Lambert Mfg. Co., Louisville, Ky.
Hold Heat-Soldering Coppers. Turner Brass Works, Sycamore, Ill.
Hol-grip-Electrode Holders. Tweco Products Co., Wichita, Kans.
Holgun-Portable Electric Drills. Black & Decker Mfg. Co., Towson, Md.
Holgun-Portable Electric Drills. Van Dorn Electric Tool Co., Towson, Md.
Holliday-Evaporative Coolers. Comfort Products Corp., Dallas, Texas.
Holly Glen-Water Heaters. Hollywood Water Heater Co., Los Angeles, Calif.
Holtite-Screws. Continental Screw Co., New Bedford, Mass.
Home-Oil Burners. Sid Harvey, Inc., Valley Stream, N. Y.
Home Comfort-Blowers, Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.
Honeycomb-Air Filters. Wilson & Co., Inc., Chicago, Ill.
Horn-O-Tone-Paint. A. C. Horn Co., Inc., Long Island City, N. Y.
Horneblende-Metal Protecting Paint and Roofing Cement. North American Fibre Products Co., Cleveland, Ohio.
Hornlume-Roofing Paint. A. C. Horn Co., Long Island City, N. Y.
Hot Blast-Furnaces and Heaters. Cole Hot Blast Mfg. Co., Chicago, Ill.
Hot Blast-Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Hot Boy-Space Heaters. Coroaire Heater Corp., Cleveland, Ohio.
Hot Spot-Electric Welders. Acme Electric Welder Co., Los Angeles, Calif.
Hotco-Furnaces, Oil Burners. Hotentot Co., Inc., Omaha, Nebr.
Houston-Gas Heaters. Houston Blow Pipe & Sheet Metal Works, Houston, Texas.
Huber-Overfeed Stokers. Flynn & Emrich Co., Baltimore, Md.
Humiclean-Cleaning Compound. Carolina Aniline & Extract Co., Charlotte, N. C.
Humid-Air-Humidifiers. Meyer Furnace Co., Peoria, Ill.
Humid-u-stat-Humidistat. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Humidair-Humidifiers. Skilbeck Mfg. Co., Kenosha, Wis.
Humidair-Washers. American Foundry & Furnace Co., Bloomington, Ill.
Humidigraph-Hygrometers. Bristol Co., Waterbury, Conn.
Humidiguide-Humidistats. Taylor Instrument Cos., Rochester, N. Y.
Humidostat-Humidistats. Johnson Service Co., Milwaukee, Wis.
Hum-O-Zone-Spray Humidifiers. Daffin Mfg. Co., Lancaster, Pa.

Humphrey-Furnaces and Heaters. General Gas Light Co., Kalamazoo, Mich.
Husky-Lite-Combination Machines. Maplewood Machinery Co., Chicago, Ill.
Hydramotor-Gas Pressure Regulating Valves. General Controls Co., Glendale, Calif.
Hydraulic Action-Controls. White-Rodgers Electric Co., St. Louis, Mo.
Hydro-Whirl-Dust Collectors. Peters-Dalton, Inc., Detroit, Mich.
Hydricide-Waterproofing. L. Sonneborn Sons, Inc., New York, N. Y.
Hydronom-Waterproofing. Barret Div., Allied Chemical & Dye Corp., New York, N. Y.
Hy-Duty-Blowers, Blower Wheels. Schwitzer-Cummins Co., Indianapolis, Ind.
Hy-Power-Snips and Shears. Wiss & Sons Co., J., Newark, N. J.
Hy-Speed-Hydraulic Tools. Munton Mfg. Co., Franklin Park, Ill.
Hyspar-Cements, Caulking Compounds, Roof Paints. Midland Paint & Varnish Co., Cleveland, Ohio.
Hytemple-Furnace Cement. Quigley Co., Inc., New York, N. Y.

Ideal-Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Ideal-Oil Burner Fittings. Boston Machine Works Co., Lynn, Mass.
Ideal-Pipe and Fittings. Riggins Metal Products, Inc., Kankakee, Ill.
Ideal-Roofing Nails. Tennessee Coal Iron & Railroad Co., Birmingham, Ala.
Ideal-Duct Insulation. Hinde & Dauch Paper Co., Sandusky, Ohio.
IEC-Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.
Ilgette-Kitchen Exhaust Fans. Ilg Electric Ventilating Co., Chicago, Ill.
Illbronze-Aluminum Paste and Powder. Illinois Bronze Powder Co., Inc., Chicago, Ill.
Immersatherm-Domestic Hot Water Control. Mercoid Corp., Chicago, Ill.
Impact-Spray Nozzles. Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
Imperial-Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.
Imperial-Pillow Blocks. Anti-Friction Bearings Co., Los Angeles, Calif.
In-Quik-Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
Inciner-Incinerators. Bowser, Inc., Incineration Div., Cairo, Ill.
Inco-Paints, Sound Deadener. Inter-Coastal Paint Co., East St. Louis, Ill.
Inco-Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.
Inconel-Alloy Plates, Sheets, Tubing, Electrodes. International Nickel Co., Inc., New York, N. Y.
Independent-Furnaces, Heaters. Independence Stove & Furnace Co., Independence, Mo.
Indian-Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Indoor-Outdoor-Thermostats. White-Rodgers Electric Co., St. Louis, Mo.
IngAcad-Plates and Sheets. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Ingels-Elbow Machines. Maplewood Machinery Co., Chicago, Ill.
Inkstop-Filters. Air-Maze Corp., Cleveland, Ohio.

Ins-Lite—Building and Duct Insulation. Insulate Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Ins-Lute—Insulating Cement. Sauereisen Cements Co., Pittsburgh, Pa.

Instant-Glo—Combustion Chambers. Boston Machine Works Co., Lynn, Mass.

Insulag—Insulation and Insulating Cement. Quigley Co., Inc., New York, N. Y.

Insulate-Windows—Heat Insulating Windows. Chamberlin Company of America, Detroit, Mich.

Insulbrick—Insulation. Quigley Co., Inc., New York, N. Y.

Insulfil—Insulation, Refractory & Insulation Corp., New York, N. Y.

Insulmat—Insulation. J. W. Mortell Co., Kankakee, Ill.

Inter-Matic—Time Switches. International Register Co., Chicago, Ill.

Interlox—Moulding and Trim. Extruded Plastics, Inc., Norwalk, Conn.

International—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.

Ironhide—Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Ironset—Furnace Cement. Fireline Stove & Furnace Lining Co., Chicago, Ill.

Ironweld—Cast Iron Welding Flux. Sight Feed Generator Co., West Alexandria, Ohio.

Iro—Rust-Proofing. Wolfe-Kote Co., Sheboygan, Wis.

Isle City—Registers. Rock Island Register Co., Rock Island, Ill.

Isomode—Fibration Pads. MB Mfg. Co., Inc., New Haven, Conn.

IVCO—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.

J

Janette—Blower Wheels and Housings. Jan-Air, Inc., Richmond, Ill.

Janitrol—Gas Burners, Furnaces. Surface Combustion Corp., Toledo, Ohio.

Jarvis—Gas Heaters. Feather-touch Products, Inc., Los Angeles, Calif.

J & C—Blower-Filter Units and Furnaces. Jackson & Church Co., Saginaw, Mich.

Ject-O-Valve—Ventilators. Swartwout Co., Cleveland, Ohio.

Jetronic—Floor Furnaces, Heaters. Consolidated Industries, Inc., Lafayette, Ind.

JFS—Transmissions. Stephens-Adamson Mfg. Co., Aurora, Ill.

Jiffy—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.

Jiffy—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.

JK—Bar Benders. James Knights Co., Sandwich, Ill.

J-M—Insulation, Roofing. Johns-Manville, New York, N. Y.

Jointite—Insulation. Mundet Cork Corp., North Bergen, N. J.

Jumbo—Oil Burners. Breeze Corps., Inc., Newark, N. J.

June-Aire—Furnaces. American Foundry & Furnace Co., Bloomington, Ill.

Junior—Water Heaters. SuperBO Mfg. Co., Los Angeles, Calif.

JusRite—Ducts, Dampers, Duct Connectors, Pipe and Fittings. Corbman Bros., Inc., Philadelphia, Pa.

JusRite L-Bo—Furnace Pipe and Fittings. Corbman Bros., Inc., Philadelphia, Pa.

K

Kant Krush—Roof Strainers. Grand Rapids Wire Products Co., Grand Rapids, Mich.

Kant-Mar—Mallets. Schmidgall Products, Peoria, Ill.

Kapco—Asphalt Board. Keystone Asphalt Products Co., Chicago, Ill.

Kasson—Motors. General Die & Stamping Co., New York, N. Y.

Kastite—Castable Refractory. Chicago Fire Brick Co., Chicago, Ill.

Kathabar—Air Conditioning Units. Dehumidifiers. Surface Combustion Corp., Toledo, Ohio.

Kaukit—Caulking Compound. L. Sonneborn Sons, Inc., New York, N. Y.

K-B—Damper Clips and Tips. Regulator Sets. G. I. Kerentoff, Cincinnati, Ohio.

KCB—Sheets. Newport Rolling Mill Co., Newport, Ky.

Keldur—Vibration Isolators. Hobbsite Products Co., Paterson, N. J.

Kelsey-Bradley—Furnaces. Kelsey Heating Co., Inc., Syracuse, N. Y.

Ken—Combustion Chamber, Baffles, Oil Burner Fittings and Accessories. Fuel Oil Tank Gauges. Robert Barclay Co., Chicago, Ill.

Kenwood—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.

Keystone—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Kimsul—Insulation. Kimbly-Clark Corp., Neenah, Wis.

King Gauge—Tank Gauge. Oil Equipment Mfg. Co., New Haven, Conn.

Kirkite—Plates. Monarch Alloys, Ravenna, Ohio.

Kirkson—Flux, Sheet Solder. Morris P. Kirk & Son, Los Angeles, Calif.

Kitch-N-Ventor—Fans. Universal Blower Co., Birmingham, Mich.

Kitchen-Aire—Kitchen Fans. Stewart Mfg. Co., Indianapolis, Ind.

Kitchen Kanopy—Kitchen Exhaust Fans. Comfort Products Corp., Dallas, Texas.

Kitcheneer—Water Heaters. Horn Sullivan Co., San Francisco, Calif.

Klee-Seafant—Caulking Compound. American Fluorite Co., Cincinnati, Ohio.

Kleen-Aire—Furnaces. Steel City Furnace Co., Springdale, Pa.

Kleenflo—Filters. Air-Maze Corp., Cleveland, Ohio.

Kleenit—Oil Burner Tank Solvent. Red Wing Oil Burner Co., Inc., Chelsea, Mass.

Kleenmaster—Furnace Vacuum Cleaners. Molloy Sales Corp., Chicago, Ill.

Klenk's—Snips. W. H. Compton Shear Co., Newark, N. J.

Klixon—Controls, Thermostats. Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.

Klondike—Welders. Ralph Fern, Scranton, Pa.

Klod—Motors. Sterling Electric Motors, Inc., Los Angeles, Calif.

K&M—Insulation. Keasbey & Mattison Co., Ambler, Pa.

Knock-Out—Arc Welders, Torches, Buffers, Grinders, Polishers and Sanders. K. O. Lee Co., Aberdeen, S. D.

Kno-Draft—High Velocity Air Diffusers. W. B. Connor Engineering Corp., New York, N. Y.

KO—Hoists. Stephens-Adamson Mfg. Co., Aurora, Ill.

Kohler—Crimping Machine. Ingram Machinery Co., Picher, Okla.

Kokote—Wire. Continental Steel Corp., Kokomo, Ind.

Kolbcast—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.

Kold-Aire—Air Conditioning Units. U.S. Air Conditioning Corp., Minneapolis, Minn.

Kolorpin—Nails. Independent Nail & Packing Co., Bridgewater, Mass.

Kolstoker—Stokers. Anchor Stove & Range Co., New Albany, Ind.

Kompo-Kork—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.

Konductor—Fasteners. Friedley-Voshardt Co., Chicago, Ill.

Konik—Sheets and Wire. Continental Steel Corp., Kokomo, Ind.

Koolmaster—Fans. Air Equipment Co., Inc., Chicago, Ill.

Koolshade—Sun Reflecting Screens. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.

Koppax—Paint. Koppers Co., Inc., Pittsburgh, Pa.

Kopro-C.P.-15—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Krack—Air Conditioning Units, Coils. Refrigeration Appliances, Inc., Chicago, Ill.

Kres-Kno Perco-Flash—Water Heaters. Kresno-Stamm Co., New York, N. Y.

Kristokrak—Enamels and Lacquers. Atlas Powder Co., North Chicago, Ill.

Krome-Kote—Metal Cleaners. Wolfe-Kote Co., Sheboygan, Wis.

Kruizite—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

KRW—Press Brake. K. R. Wilson, Buffalo, N. Y.

K.S.V.—Ventilators. Kernchen Co., Chicago, Ill.

KX-99—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Kwik-Melter—Roofers' Kettles. Littleford Bros., Inc., Cincinnati, Ohio.

Kwik-Tite—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.

Kwik-Way—Damper Regulators. Hart & Cooley Mfg. Co., Holland, Mich.

L

L-Blow—Exhausters, Ventilators. Trade-Wind Motorfans, Inc., Los Angeles, Calif.

LA—Motors. Louis Allis Co., Milwaukee, Wis.

Lacq—Lacquers. Glidden Company, Cleveland, Ohio.

Lactile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Lad-E-Vator—Hoist. Campbell Equipment Co., Chicago, Ill.

Lamneck—Ducts and Duct Fittings, Pipe and Fittings. Clayton & Lambert Mfg. Co., Louisville, Ky.

Lancel—Stainless Steel Soldering Flux. F. H. Langenkamp Co., Indianapolis, Ind.

Larco—Asbestos Paper Paste. Western Mineral Products Co., Minneapolis, Minn.

Larkweld—Welders. Larkin Electro Products Corp., Pine Bluff, Ark.

Lassen—Water Heaters. Dalco Appliance Co., San Francisco, Calif.

Lastile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Latest—Ski-Light Lifts. Danzer Metal Works Co., Hagerstown, Md.

Lawson—Heaters. United States Stove Co., South Pittsburgh, Tenn.
Lead-Head—Nails. W. H. Maze Co., Peru, Ill.
Lead-Seal—Roofing Nails. The Deniston Co., Chicago, Ill.
Leader—Burners, Furnaces. Berger Furnace Mfg. Co., Pittsburgh, Pa.
Leader—Oil Burners and Circulating Heaters. Victor Oil Burner Mfg. Co., Hartford, Conn.
Leadtex—Lead-Coated Sheets. Revere Copper & Brass Inc., New York, N. Y.
Leastoker—Stokers. H. Leslie Leas Co., Monona, Iowa.
Lectro-Glo—Heaters. Day & Night Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Lectrodryer—Dehumidifier. Pittsburgh Lectrodryer Corp., Pittsburgh, Pa.
Lehigh—Furnaces, Heaters. Pittston Stove Co., Pittston, Pa.
Leigh—Shutters, Ventilators. Air Control Products, Inc., Coopersville, Mich.
Leonard—Circulating Oil Heater. W. R. Ames Co., San Francisco, Calif.
Level-Temp—Thermostats. White-Rodgers Electric Co., St. Louis, Mo.
Levelizer—Gas Controls. L. J. Mueller Furnace Co., Milwaukee, Wis.
Levelometer—Oil Tank Gauges. Liquidometer Corp., Long Island City, N. Y.
Lexusco—Roof Fastening Clips, Roofing Paint. Lexington Supply Co., Cleveland, Ohio.
Liberty—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Liberty—Furnaces, Dowagiac Steel Furnace Co., Dowagiac, Mich.
Liberty—Caulking Compound, Roof Cement, Paint. Carter Paint Co., Liberty, Ind.
Liberty—Ventilators. Penn Ventilating Co., Philadelphia, Pa.
Life-Line—Motors. Westinghouse Electric Corp., Pittsburgh, Pa.
Lifetime—Roofing, Sheets, Shingles, Conductor Pipe and Fittings, Rivets, Tubing. Reynolds Metals Co., Louisville, Ky.
Light Duty—V-Belts. B. F. Goodrich Co., Akron, Ohio.
Lightening—Hole Punches. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.
Lightweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Lincolnweld—Arc Welders. The Lincoln Electric Co., Cleveland, Ohio.
Lincolnwelder—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.
Line-O-Flo—Diffusers, Ventilators. Barber-Colman Co., Rockford, Ill.
Lipman—Air Conditioning Units, Coils, Compressors. General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Liquidepth—Tank Gauge. Petrometer Corp., Long Island City, N. Y.
Lite-Cast—Combustion Chambers. Monogram Products Co., Philadelphia, Pa.
Lithoform—Coating Chemical for Galvanized, Zinc or Cadmium surfaces. American Chemical Paint Co., Ambler, Pa.
Little America—Gas Space Heaters. American Gas Heater Corp., Chicago, Ill.
Little Blacksmith—Punches and Slitting Machines. J. F. Kidder Mfg. Co., Inc., Burlington, Vt.
Little Bobby—Brakes. A. R. Harris, Hammond, Ind.
Little Giant—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Little Gem—Gas Burner. Columbia Burner Co., Toledo, Ohio.
Liv-Air—Air Conditioning Furnaces. Livingston, Inc., Marshall, Mich.
Lloyd's—Soldering Flux. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
L-M—Tubing. Lewin-Mathes Co., St. Louis, Mo.
L & N—Thermometers. Leeds & Northrup Co., Philadelphia, Pa.
Lo-Bill—Storage Water Heater. Autogas Co., Chicago, Ill.
Lo-Blast—Gas Burners. Mid-Continental Metal Products Co., Chicago, Ill.
Lo-Boy—Stokers. Whiting Corp., Harvey, Ill.
Lo-Hed—Electric Hoists. American Engineering Co., Philadelphia, Pa.
Lo-Pilot—Space and Water Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Lo-Set—Stokers. Canton Stoker Corp., Canton, Ohio.
Load King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
Loadgrip—Duct hangers. United Industries, Madison, Wis.
Lock-Joint—Pipe, Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
Lock-Seam—Blow Pipe Fittings. Chicago Metal Mfg. Co., Chicago, Ill.
Lockaire—Insulation Board. Plastergon Wall Board Co., Buffalo, N. Y.
Lockbolt—Metal Fasteners. Huck Mfg. Co., Detroit, Mich.
Locktite—Damper Regulators. Ohio Products Co., Cleveland, Ohio.
Lok-Joint—Insulating Lath. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.
Lone Star—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Loop-the-Loop—Snow Guards. Danzer Metal Works Co., Hagerstown, Md.
Lovejoy-Ideal—V-belts. Lovejoy Flexible Coupling Co., Chicago, Ill.
Lowdense—Insulation. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.
Low—Slip Roll Forming Machines. San Angelo Foundry & Machinery Co., San Angelo, Texas.
L & R—Conductor Pipe. Lamb & Ritchie Co., Cambridge, Mass.
L-U—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Luco—Acid Brushes. Flux, Solder. Thos. F. Lukens Metal Co., Philadelphia, Pa.
Lume-Tex—Aluminum Paint. Truscon Laboratories, Detroit, Mich.
Lumino—Paint. Koppers Co., Inc., Pittsburgh, Pa.
Lustralumin—Aluminum Paint. Blue Ridge Talc Co., Inc., Henry, Va.
Lustrik—Aluminum Sheets. Philadelphia Rust Proof Co., Philadelphia, Pa.
Luxaire—Blower-Filter Units, Furnaces, Furnace Pipe and Fittings. The C. A. Olsen Mfg. Co., Elyria, Ohio.
Lyonore—Sheets. Lyon-Conklin & Co., Inc., Baltimore, Md.
Lyston—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
Lytestone—Soldering Flux. Tinning Baths. Farrelloy Co., Inc., Philadelphia, Pa.

M

Macheta—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Piqua, Ohio.
Magic-Aire—Wall Furnace. A. C. Co., Los Angeles, Calif.
Magic Dial—Control Systems. Midwest Automatic Control Co., Des Moines, Iowa.
Magic Dial—Thermostats. Perfex Corp., Milwaukee, Wis.

Magnalite—Skylight Glass. J. Merrill Richards, Boston, Mass.
Magnehelic—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.
Mainliner—Fan Blades. Alan E. Burden Co., Hollywood, Calif.
Majestic—Roofing. Skylights, Ventilators. W. A. Fingles, Inc., Baltimore, Md.
Mammoth—Furnaces. Stainless & Steel Products Co., Saint Paul, Minn.
Manganarc—Welding Electrodes. Universal Welder Corp., Cleveland, Ohio.
Manganend—Electrodes. Arcos Corp., Philadelphia, Pa.
Manganese-Phospholene No. 7—Rust Preventive. Western Reserve Laboratories, Cleveland, Ohio.
Manganweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
Marietta—Enamels and Lacquers. American-Marietta Co., Chicago, Ill.
Mark Time—Time Switches. M. H. Rhodes, Inc., Hartford, Conn.
Marquette—Presses and Dies. E. W. Bliss Co., Canton, Ohio.
Mars—Connectors. Rattan Mfg. Co., New Haven, Conn.
Mars—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.
Mars Hi-Boy—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.
Marsalis Chubby—Floor Furnace. American Metal Products Co., Fort Worth, Texas.
Marvair—Air Conditioning Units. Muncie Gear Works, Inc., Muncie, Ind.
Marvelous—Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Mary-Mac—Storage Water Heaters. McDaniel Mfg. Co., Inc., Dallas, Texas.
Masco—Combustion Chambers. Munn and Steele, Inc., Newark, N. J.
Mascobond—Furnace Cement and Insulation. Munn and Steele, Inc., Newark, N. J.
Mascokast—Refractory. Munn and Steele, Inc., Newark, N. J.
Mascote—Insulating Cement and Duct Insulation. Munn and Steele, Inc., Newark, N. J.
Mascrete—Refractories. Munn and Steele, Inc., Newark, N. J.
Massachusetts—Blowers, Fans. Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Master—Controls, Motors, Pulleys, Thermostats. White Mfg. Co., St. Paul, Minn.
Master—Circles, Hangers and Fittings. Royal-Apex Mfg. Corp., Brooklyn, N. Y.
Master—Evaporative Coolers. Essick Mfg. Co., Los Angeles, Calif.
Master—Stokers. Muncie Gear Works, Inc., Muncie, Ind.
Master Blowertrol—Thermostatic Hydraulic Control. White Mfg. Co., St. Paul, Minn.
Master Kraft—Coils, Oil Burners, Furnaces. Harvey-Whipple, Inc., Springfield, Mass.
Mastic Board—Insulation. Keystone Asphalt Products Co., Chicago, Ill.
Maxitrol—Gas Pressure Regulating Valves. Detroit Gas Regulator Co., Detroit, Mich.
Mayari R—Nickel-Chromium Sheets and Plates. Bethlehem Steel Co., Bethlehem, Pa.
Mayn Air—Stack Head Dampers. Henry Furnace Co., Medina, Ohio.
McDonaldaire—Furnaces. A. Y. McDonald Mfg. Co., Dubuque, Iowa.
McIlvaine—Oil Burners. Mason Machine Co., Inc., York, Pa.
McKee—Gas Burners. Eclipse Fuel Engineering Co., Rockford, Ill.

M. E.—Motors. Marathon Electric Mfg. Corp., Wausau, Wis.
 Mecco—Doors and Shutters, Skylights, Ventilators. Moeschel-Edwards Co., Inc., Cincinnati, Ohio.
 Meco—Gas Welding Rod, Torches. Modern Engineering Co., St. Louis, Mo.
 Meco Jiffy—Soldering Torches. Modern Engineering Co., St. Louis, Mo.
 Melo-Air—Furnaces. Agrícola Furnace Co., Inc., Gadsden, Ala.
 Mel-Rock—Fan-Filters, Ventilators and Washers. Mellish & Murray Co., Chicago, Ill.
 Memphis Super-Fan—Ventilating Fans. Ford Blow Pipe & Mfg. Co., Memphis, Tenn.
 Mercury—Soldering Irons. Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass.
 Metal-Glo—Metal Cleaners. Turco Products, Inc., Los Angeles, Calif.
 Metal-Master—Snips and Shears. J. Wiss & Sons Co., Newark, N. J.
 Metal Zipper—Arc Welders. Mid-States Welder Mfg. Co., Chicago, Ill.
 Metalbestos—Chimney Caps, Pipe and Fittings. William Wallace Co., Belmont, Calif.
 Metaleaf—Aluminum Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
 Metallite—Paints. Glidden Co., Cleveland, Ohio.
 Metalmaster—Band Saws. DoAll Co., Des Plaines, Ill.
 Metalprep—Rust Preventative Chemicals. Neilson Chemical Co., Detroit, Mich.
 Meteor—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
 Mex-Ko—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
 Meyco—Furnaces. Meyer Furnace Co., Peoria, Ill.
 M.F.C.—Gas Floor Furnaces. Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
 M.H.—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 M&H—Zinc Sheets. Matthiessen & Hegele Zinc Co., LaSalle, Ill.
 Mica-kote—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Micalul—Insulation. Munn and Steele Inc., Newark, N. J.
 Micro-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meriden, Conn.
 Micro-Weld—Welders. Micro Products Co., Chicago, Ill.
 Microlock—Bearings. Shafer Bearing Corp., Downers Grove, Ill.
 Micromax—Temperature and Humidity Recorders. Leeds & Northrup Co., Philadelphia, Pa.
 MicroRold—Stainless Sheets. Washington Steel Corp., Washington, Pa.
 Microrol—Dampers. Motors. Barber-Colman Co., Rockford, Ill.
 Microtherm—Thermostats. Barber-Colman Co., Rockford, Ill.
 Midget—Brakes. A. R. Harris, Hammond, Ind.
 Midget—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
 Midget King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
 Mighty Midget—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
 Mighty Midget Unishear—Shears. Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
 Milcor—Furnace Pipe, Roofing and Roofing Products. Inland Steel Products Co., Milwaukee, Wis.

Milford—Saw Blades. Henry G. Thompson & Son Co., New Haven, Conn.
 Milwaukee—Presses and Dies. Doelger & Kirsten, Inc., Milwaukee, Wis.
 Milwaukee—Water Heaters. A. O. Smith Corp., Milwaukee, Wis. & Toledo, Ohio.
 Mini-Miser—Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
 Minicorder—Recorders. Dickson Co., Chicago, Ill.
 Minit Kote—Metal Cleaner. Klem Chemicals, Inc., Detroit, Mich.
 Minnemeyer—Conductor Hooks. La-Crosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
 Miracul—Heat Pump. General Eng. & Mfg. Co., St. Louis, Mo.
 Mirawal—Metal Sheets. Baltimore Porcelain Steel Corp., Baltimore, Md.
 Missouri Flint—Fire Brick. Chicago Fire Brick Co., Chicago, Ill.
 Mixend—Electrodes. Arcos Corp., Philadelphia, Pa.
 Mizou—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
 M&M—Humidifiers and Fittings, Valves. McDonnell & Miller, Inc., Chicago, Ill.
 ModernAire—Furnaces, Oil Burners, Heating Slide Rules, Stokers. Des Moines Furnace and Stove Repair Co., Des Moines, Iowa.
 ModernAire—Fans. National Gas Equipment Co., Inc., Terrell, Texas.
 Moderne—Blowers, Furnaces. Agrícola Furnace Co., Inc., Gadsden, Ala.
 Moderne-Aire—Furnaces, Blowers. Agrícola Furnace Co., Gadsden, Ala.
 Modernistic—Heaters. Agrícola Furnace Co., Inc., Gadsden, Ala.
 Modufume—Floor Furnaces. Mahl Mfg. Co., Huntington Park, Calif.
 Moduflow—Control Systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Modutrol—Duct Damper Motors. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Modu-Wave—Welders. Sciaky Bros., Inc., Chicago, Ill.
 Mogul—Rust Preventive Chemicals, Soot Destroyer. North American Fibre Products Co., Cleveland, Ohio.
 Mogul Seal—Compounds. North American Fibre Products Co., Cleveland, Ohio.
 Mohawk—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Moldit—Refractories. Refractory & Insulation Corp., New York, N. Y.
 Monad-Flow—Gas Burners. Monad Products Co., Dearborn, Mich.
 Monarch—Furnaces. Forest City Foundries Co., Cleveland, Ohio.
 Moncrief—Blower-Filter Units, Furnaces. Henry Furnace Co., Medina, Ohio.
 Monel—Sheets, Plate and Tubing, Electrodes. International Nickel Co., New York, N. Y.
 Monend—Arc Welding Electrodes. Arcos Corp., Philadelphia, Pa.
 Monitor—Furnaces. Marshall Furnace Co., Marshall, Mich.
 Monmouth—Humidifiers. Cleveland Humidifier Co., Cleveland, Ohio.
 Mono B-H—Furnace Insulation. Baldwin Hill Co., Trenton, N. J.
 Mono-Deflector—Baffles. Monogram Products Co., Philadelphia, Pa.
 Mono-Line—Duct Insulation. Quigley Co., Inc., New York, N. Y.
 Monocast—Refractories. Ramtite Co., Chicago, Ill.
 Monogram—Furnaces. Quincy Stove Mfg. Co., Quincy, Ill.

Monoport—Gas Burners. Modern Controls Corp., Detroit, Mich.
 Monovent—Ventilators. Burt Mfg. Co., Akron, Ohio.
 Morflex—Flexible Couplings. Morse Chain Co., Ithaca, N. Y.
 Morlex—Rust Preventives. Carbide and Carbon Chemicals Div. Union Carbide and Carbon Corp., New York, N. Y.
 Morse—Blow Pipe Collectors. Goergen-Mackwith Co., Inc., Buffalo, N. Y.
 Mor-Sun—Oil Burners, Furnaces. Morrison Steel Products, Inc., Buffalo, N. Y.
 Mortemp Chimney Furnace—Air Conditioning Furnaces. Chimney-Furnace Corp., Rockville, Md.
 Mortex—Metal Protective Coatings. J. W. Mortell Co., Kankakee, Ill.
 Mortite—Caulking and Glazing Compounds, Roofing Paint. J. W. Mortell Co., Kankakee, Ill.
 Motorslay—Contact Device. Barber-Colman Co., Rockford, Ill.
 Motorized Draft-O-Stat—Controls. Hotstream Heater Co., Cleveland, Ohio.
 Motorstoker—Stokers and Air Conditioning Furnaces. Hershey Machine & Foundry Co., Manheim, Pa.
 Mototurb—Ventilators. Uno Ventilator Co., Saugus, Mass.
 Mountain Air—Evaporative Conditioners and Fans. Central States Mfg. Co., Inc., Arkansas City, Kan.
 M-R—Wire Glass. H. H. Robertson Co., Pittsburgh, Pa.
 M & T—Arc Welders, Metal & Thermit Corp., New York, N. Y.
 Muckle-Vents—Roof Ventilators. Muckle Mfg. Co., Owatonna, Minn.
 Mule-Hide—Cement, Caulking Compounds, Paint and Roofing. Lehon Co., Chicago, Ill.
 Multi-Duty—Filters. American Air Filter Co., Inc., Louisville, Ky.
 Multi-Flame—Gas Burners. American Gas Burner, Inc., Indianapolis, Ind.
 Multi-Max—Punch Presses. Diamond Machine Tool Co., Los Angeles, Calif.
 Multi-V—Belts. B. F. Goodrich Co., Akron, Ohio.
 Multi-Vent—Air Diffuser. Pyle-National Co., Multi-Vent Div., Chicago, Ill.
 Multi-Zone—Conditioners. Micheli Air Conditioning Co., Inc., Schenectady, N. Y.
 Multiblade—Welding Flame Exhausters. General Blower Co., Morton Grove, Ill.
 Multidione—Collectors. Western Precipitation Corp., Los Angeles, Calif.
 Multitherm—Air Conditioning Units. Clarge Fan Co., Kalamazoo, Mich.
 Multivane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
 Murex—Welding Electrodes. Metal & Thermit Corp., New York, N. Y.
 M-VB—Fittings, Valves. Scovill Mfg. Co., Morency-Van Buren Div., Sturges, Mich.
 M/W—Filters. American Air Filter Co., Inc., Louisville, Ky.
 Myka-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.

N

Nairoil—Oil Burners, Combustion Chambers. National Airoil Burner Co., Philadelphia, Pa.
 Nalco—Flux. National Lead Co., New York, N. Y.
 NarroWall—Wall Furnaces. Holly Mfg. Co., Pasadena, Calif.
 National—Blower-Filter Units, Furnaces. McGill Foundry & Furnace Co., Bloomington, Ill.

National—Furnaces. Excelsior Stove & Mfg. Co., Quincy, Ill.
National—Horizontal Furnaces. Stainless & Steel Products Co., St. Paul, Minn.
National—Water Heaters. Mustee Heater Co., Cleveland, Ohio.
National Champion—Furnaces. National Heater Co., St. Paul, Minn.
National No Rivet—Damper Clips. United States Register Co., Battle Creek, Mich.
Natur-Temp—Flame-proof Cotton Insulation. Barnhardt Mfg. Co., Charlotte, N. C.
Naturzone—Board Insulation. Wilson & Co., Inc., Chicago, Ill.
Navaho—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
NCG—Soldering and Welding Flux, Soldering Torches, Welding Rods. National Cylinder Gas Co., Chicago, Ill.
Nebel-Kote—Paint. Nebel Mfg. Co., Cleveland, Ohio.
Nebelastic—Roof Cement. Nebel Mfg. Co., Cleveland, Ohio.
Nelson—Blower-Filter Units, Furnaces, Stokers. Heating Assurance, Inc., Spokane, Wash.
Nev-A-Rust—Paints. Glidden Co., Cleveland, Ohio.
Never Slip—Conductor Fittings. La-Crosse Steel Roofing & Corrugating Co., La-Crosse, Wis.
Never-Stain—Aluminum Nails, Ridge Roll, Roofing. Nichols Wire & Aluminum Co., Davenport, Iowa.
New American—Smoke Pipe Dampers. Griswold Mfg. Co., Erie, Pa.
New Braze—Flux. Sherman & Co., New York, N. Y.
New Departure—Oil Burners. Breeze Corps., Inc., Newark, N. J.
New Detroit—Draft Gauges. Detroit Air Conditioning Service Co., Inc., Detroit, Mich.
Niagara—Furnaces, Blowers, Oil Burners. Forest City Foundries Co., Cleveland, Ohio.
Nib-Shear—Power Nibber-Shear. H-A Mfg. Co., York, Pa.
Nibco—Copper Tube Fittings. Northern Indiana Brass Co., Elkhart, Ind.
Nickelend—Electrodes. Arcos Corp., Philadelphia, Pa.
Nickeloid—Sheets. American Nickeloid Co., Peru, Ill.
Nickend—Electrodes. Arcos Corp., Philadelphia, Pa.
Nicend—Electrodes. Arcos Corp., Philadelphia, Pa.
Niteair—Night Air Cooling Fans. Lau Blower Co., Dayton, Ohio.
Nitercool—Fans. Air Equipment Co., Inc., Chicago, Ill.
Noah's Pitch—Roof Cement, Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
NoDrip—Insulation. J. W. Mortell Co., Kankakee, Ill.
No-Dust—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
No-Flex—Registers and Faces. Hart & Cooley Mfg. Co., Holland, Mich.
No-Rivet—Damper Regulators. Ohio Products Co., Cleveland, Ohio.
No-Spat—Welding Flux, Midland Paint & Varnish Co., Cleveland, Ohio.
No-Streak—Registers. Rock Island Register Co., Rock Island, Ill.
No Tar In—Roofing Paint. Rutland Fire Clay Co., Rutland, Vt.
Nokorode—Flux. Chase Brass & Copper Co., Inc., Waterbury, Conn.
Non-Clogging—Spray Nozzles. Link Belt Co., Chicago, Ill.

Non-Con-Dux—Cement, Insulation, Paper, Paste. Grant Wilson, Inc., Chicago, Ill.
Non-Metallic—Registers. Standard Stamp- ing & Perforating Co., Chicago, Ill.
Non-Syphoning—Steel Roofing. Inland Steel Products Co., Milwaukee, Wis.
Norblo—Blowers, Fittings, Collectors, Housing, Air Washers. Northern Blower Co., Cleveland, Ohio.
Norco—Stove and Furnace Repairs. Northwestern Stove Repair Co., Chicago, Ill.
Northwind—Air Conditioning Unit. Pleasantaire Corp., Washington, D. C.
Norwesco—Ducts, Fittings, Gutters, Pipe, Ridge Rolls, Roof Trim. Northwest Metal Products, Inc., Seattle, Wash.
Norwester—Blowers. Grand Rapids Die & Tool Co., Grand Rapids, Mich.
Novoid—Bases, Insulation. Cork Import Corp., Englewood, N. J.
Nu-Air—Fan Blades, Fans, Louvers, Ventilators. Meier Electric & Machine Co., Indianapolis, Ind.
Nu-Alpina—Gravity Roof Ventilators. Inland Steel Products Co., Milwaukee, Wis.
Nu-Braze—Flux, Solder. Sherman & Co., New York, N. Y.
Nu Galv—Metal Protecting Paint. Southern States Iron Roofing Co., Savannah, Ga.
Nu-Grip—Snips and Shears. J. Wiss & Sons Co., Newark, N. J.
Nu-Notch—Ventilators. Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
Nu-Trojan—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.
Nu-Wood—Rigid Insulation. Wood Conversion Co., St. Paul, Minn.
Nudeck—Roof Cement. United Gilsonite Laboratories, Scranton, Pa.
Nupla—Mallets. New Plastic Corp., Hollywood, Calif.
Nutipe—Gas Conversion Burners. Columbia Burner Co., Toledo, Ohio.
Nuvent—Ventilators. Aeolus Dickinson, Chicago, Ill.

Octagon Power—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Octagon Siphon—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Octopus, Jr.—Welding Fume Exhauster. Chelsea Fan & Blower Co., Inc., Irvington, N. J.
OEM—Combustion Chambers, Oil Burner Fittings. Oil Equipment Mfg. Corp., New Haven, Conn.
Ohio Triple Twisted—Wire Hangers. Ohio Wire Products Co., Dover, Ohio.
Oil-A-Fire—Burners, Furnaces. Automatic Firing Corp., St. Louis, Mo.
Oil-Aire-Flo—Oil Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Oil-Economy—Oil-Burning Air-Conditioning Furnace. International Heater Co., Utica, N. Y.
Oil-in-Aire—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Oil-O-Matic—Oil Burners, Furnaces. Williams Oil-O-Matic Div., Eureka, Williams Corp., Bloomington, Ill.
Oilfire Monogram—Furnaces. Quincy Stove Mfg. Co., Quincy, Ill.
Oilfire—Oil Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Oilifier—Fuel Oil Pump. A-P Controls Corp., Milwaukee, Wis.

Oilway—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
OK—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Ol'Faithful—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.
Olympic—Heaters. Washington Stove Works, Everett, Wash.
One-Minute—Furnaces. Worsham Co., Inc., St. Louis, Mo.
Original Dowagiac—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Out-O-Wall—Registers. Rock Island Register Co., Rock Island, Ill.
Ovaltube—Gas Burners. Beck Engineering Combustion Company, St. Louis, Mo.
OX—Punches. Parker Kalon Corp., New York, N. Y.
Oxweld—Welding Apparatus. Linde Air Products Co., New York, N. Y.
Oxycutend—Electrodes. Arcos Corp., Philadelphia, Pa.
Ozark—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Ozite—Insulation. American Hair & Felt Co., Chicago, Ill.

P

Pabco Coolite—Sheet Metal Paint. Pabco Products Inc., San Francisco, Calif.
Pacific—Furnaces. W. W. Rosebaugh Co., Salem, Ore.
Pacific—Furnaces, Heaters. Palmer Mfg. Corp., Phoenix, Ariz.
Pacific—Water Heaters. United States Radiator Corp., Detroit, Mich.
Packaged Weather—Store Coolers. General Electric Co., Bloomfield, N. J.
Packard—Water Heaters. W. M. Dary Co., Long Beach, Calif.
Paintbond—Bonded Sheets. U. S. Steel Co., Pittsburgh, Pa.
Paintgrip—Metal Sheets. Armco Steel Corp., Middletown, Ohio.
Pak-Ice—Machines. Vilter Mfg. Co., Milwaukee, Wis.
Palco Wool—Saferized—Insulation. Pacific Lumber Co., San Francisco, Calif.
Palmaire—Blowers, Furnaces, Humidifiers. Palmer Mfg. Co., Phoenix, Ariz.
Panelaire—Wall Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.
Panelox—Stainless Steel Combustion Chambers. Stefcu Steel Co., Michigan City, Ind.
Panelray—Wall Heaters, Suspended Furnaces. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Papico—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
Par—Compressors. Lynch Corp., Toledo, Ohio.
Paragon Booster—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
Paramount—Evaporative Air Conditioners. Essick Mfg. Co., Los Angeles, Calif.
Paramount—Flashing. Flemm Lead Co., Inc., Long Island City, N. Y.
Paramount—Hollow Metal Windows. Willis Steel Corp., Galesburg, Ill.
Parco—Skylight Lifts. Park City Corncor Works, Inc., Bridgeport, Conn.
Parco—Metal Cleaners and Rust Preventive Compounds. Parker Rust-Proof Co., Detroit, Mich.
Patrol—Gas Burner Pilots. Cleveland Heater Co., Cleveland, Ohio.
Payneheat—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
PBA Unit—Utility Room Furnace. Dowagiac Steel Furnace Co., Dowagiac, Mich.

P-C-Heaters. Pernot Corp., Norwalk, Calif.
 P&C-Roofing Felt. Proie & Coogan Heating Co., Pittsburgh, Pa.
 P&C Elastertite-Roof Cement, Paint. Proie & Coogan Heating Co., Pittsburgh, Pa.
 Peer-Welders, Welding Timers. Peer, Inc., Benton Harbor, Mich.
 Peerless-Stokers. Eddy Stoker Corp., Chicago, Ill.
 Peerless-Blowers, Blower-Washer Units. Washers. New York Blower Co., Chicago, Ill.
 Peerless-Eaves Trough Hangers. Abbott Mfg. Co., Painesville, Ohio.
 Pemco-Stainless Firebox Fittings, Baffles. Oil Equipment Mfg. Co., New Haven, Conn.
 Penetrol-Paint. Flood Co., Cleveland, Ohio.
 Penflex-Flexible Metal Hose and Fittings. Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.
 Penglass-Roof Ventilators. Pennsylvania Wire Glass Co., Philadelphia, Pa.
 Penn-Aire-Furnaces. Union Mfg. Co., Inc., Boyertown, Pa.
 Penn-Mont-Roofing Slate. Structural Slate Co., Pen Argyl, Pa.
 Penna-Furnaces. Pennsylvania Furnace & Iron Co., Warren, Pa.
 PennSalt-Rust Preventive, Chemicals and Cleaners. Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
 Pentco-Combination Snips and Punches. Penn Tool Co., Philadelphia, Pa.
 Perco-Flash-Water Heaters. Kresno-Stamm Mfg. Co., Palisades Park, N. J.
 Percoproof-Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Perfection-Eaves Trough Fittings and Accessories. Iwan Bros., South Bend, Ind.
 Perfection-Wire Conductor Hangers. Iwan Bros. Inc., South Bend, Ind.
 Perfecto-Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.
 Permaclad-Clad Sheets. Alan Wood Steel Co., Conshohocken, Pa.
 Permadine-Coating Chemical for Steel or Iron Surfaces. American Chemical Paint Co., Ambler, Pa.
 Permaglas-Water Heaters. A. O. Smith Corp., Milwaukee, Wis. & Toledo, Ohio.
 Pernoco-Evaporative Coolers. Pernot Corp., Norwalk, Calif.
 Perry-Damper Clips and Tips. Griswold Mfg. Co., Erie, Pa.
 Pet-Oil Burners. Breeze Corps., Inc., Newark, N. J.
 PeTeCo-Baffles and Combustion Chambers. B. A. Peterson Co., Dowagiac, Mich.
 Petro-Oil Burners, Furnaces and Water Heaters. Petroleum Heat & Power Co., Stamford, Conn.
 Pexto-Metal Workers' Machines and Tools, Roofers Tools. Peck, Stow & Wilcox Co., Southington, Conn.
 P & H-Cranes, Electrodes, Hoists, Arc Welders. Harnischfeger Corp., Milwaukee, Wis.
 Pickle Polish-Stainless Cleaner. American Chemical Paint Co., Ambler, Pa.
 Pilotstat-Gas Pilot Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Pioneer-Controls. Crown Controls Co., Inc., New Bremen, Ohio.
 Pioneer-Oil Burners. Scott-Newcomb, Inc., St. Louis, Mo.

Pipeline-Stokers and Stoker Furnaces. Pocahontas Fuel Co., Inc., Stoker Div., Cleveland, Ohio.
 Pittsburgh-Conversion Gas Burner, Suspended Furnace, Automatic Gas Equipment Co., Pittsburgh, Pa.
 P.I.V.-Gear. Link Belt Co., Chicago, Ill.
 P-K-Nails, Screws, Parker-Kalon Corp., New York, N. Y.
 P&K-Oil Burners. Persson & Kellison, Seattle, Wash.
 Planeweld-Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Plasti-Static-Air Filters. Master Products Co., Inc., Chicago, Ill.
 Plastic-Calk-Caulking Compounds. Chamberlin Co. of America, Detroit, Mich.
 Plastic Elastigum-Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
 Plastic Insulcrete-Refractories. Quigley Co., Inc., New York, N. Y.
 Plastic PB-Cement Barret Div., Allied Chemical & Dye Corp., New York, N. Y.
 Plastikon-Rubber Putty. B. F. Goodrich Co., Akron, Ohio.
 Plastiktrim-Plastic Mouldings, Trim. R. F. Werner Co., New York, N. Y.
 Plastite-Roof Cement. Coopers Creek Chemical Corp., West Conshohocken, Pa.
 Plastoid-Caulking Compounds, Furnace Cement. Plastic Products Co., Detroit, Mich.
 Playford-Stokers. Rosedale Foundry & Machine Co., Pittsburgh, Pa.
 Plexiform-Blowers. Bayley Blower Co., Milwaukee, Wis.
 Polyken-Industrial Tape. Bauer & Black Div., The Kendall Co., Chicago, Ill.
 Porto-Shear-Electric Shears. Van Dorn Electric Tool Co., Towson, Md., and Black & Decker Mfg. Co., Towson, Md.
 Portovent-Flexible Hose. American Ventilating Hose Co., New York, N. Y.
 Power-Flow-De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
 Power-Pac-Fans. Uno Ventilator Co., Saugus, Mass.
 Power Vane-Pneumatic Grinders. Chicago Pneumatic Tool Co., New York, N. Y.
 Poweraire-Furnaces. Jackson & Church Co., Saginaw, Mich.
 Powergas-Gas Burners. Jackson & Church Co., Saginaw, Mich.
 Powerhouse-Insulating Cement. Baldwin-Hill Co., Trenton, N. J.
 Poweroil-Oil Burners. Jackson & Church Co., Saginaw, Mich.
 PowerRated-Commercial-Industrial Furnaces. Jackson & Church Co., Saginaw, Mich.
 Powerstat-Gas Pressure Regulating Valves. Mercoid Corp., Chicago, Ill.
 Powermatic-Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.
 Precipitron-Electrostatic Air Filter. Westinghouse Elec. Corp., Sturtevant Div., Hyde Park, Boston 36, Mass.
 Premier-Welding Rod. American Steel & Wire Co., Cleveland, Ohio.
 Premier Automatik-Stoker-Fired Air Conditioning Furnaces. Premier Furnace Co., Dowagiac, Mich.
 Premier DeLuxe-Furnaces. Premier Furnace Co., Dowagiac, Mich.
 Premier Master-Furnaces. Premier Furnace Co., Dowagiac, Mich.

Pre-Notch-Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.
 Prentice-Pillow Blocks. Western Thermal Equipment Co., Los Angeles, Calif.
 Prep-Soldering Torches. Pressure Products Corp., Chicago, Ill.
 Preprite-Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.
 Prepwash-Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.
 Preadwoods-Insulation Board. Masonite Corp., Chicago, Ill.
 Prestico-Furnace and Roof Cement, Compounds, Paint. Prestite Engineering Co., St. Louis, Mo.
 Presteel-Metal Stampings. Worcester Pressed Steel Co., Worcester, Mass.
 Presto-Soldering Torch. American Products Corp., Chicago, Ill.
 Prest-O-Lite-Soldering Coppers, Soldering Torches, Welding Equipment. Linde Air Products Co., New York, N. Y.
 Prest-O-Weld-Oxy-Acetylene Welding Equipment, Torches. Linde Air Products Co., New York, N. Y.
 Prime-Kote-Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Princo-Hygrometers, Psychrometers, Electric Relays, Thermometers and Thermostats. Precision Thermometer and Instrument Co., Philadelphia, Pa.
 Propellair-Fans and Ventilators. Robbins & Myers, Inc., Springfield, Ohio.
 Protocal-Sheet Metal Paint. Coopers Creek Chemical Corp., West Conshohocken, Pa.
 Protector-Snow Guards. David Levow, New York, N. Y.
 Protector-Germicidal Lamps. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.
 Protectorelay-Oil Burner Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Pul-Air-Ventilators. Penn Ventilating Co., Philadelphia, Pa.
 Pul-Air Ridge-Ventilators. Penn Ventilating Co., Philadelphia, Pa.
 Pul-Lift-Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
 Pulverzone-Stokers. American Coal Burner Co., Chicago, Ill.
 Punchaw-Tools. Hub Specialty Co., Reading, Mass.
 Punkah-Louvers. Wilfrid O. White & Sons, Inc., Boston, Mass.
 Puraire-Blower-Filters. Kortz Blower Mfg. Co., Grand Rapids, Mich.
 Pure-Dure-Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
 Purox-Oxy-Acetylene Welding Equipment and Torches. Linde Air Products Co., New York, N. Y.
 Pyralux-Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.
 Pyrobar-Roofing Tile. United States Gypsum Co., Chicago, Ill.
 Pyrotroon-Temperature Recorders. Bailey Meter Co., Cleveland, Ohio.

Q

Quad-Furnace Blowers. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
 Quaker City-Eaves Trough and Gutters, Conductor Fittings and Accessories, Pipe, Ridge Rolls and Ridging. Berger Bros. Co., Philadelphia, Pa.
 Quantrol-Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
 Q-Chrome-Insulating Cement. Quigley Co., Inc., New York, N. Y.
 Q-Chromatic-Insulating Cement. Quigley Co., Inc., New York, N. Y.

Quick—Water Heaters. Security Mfg. Co., Kansas City, Mo.
 Quick Action—Clamps. Roesch Tool Products, Los Angeles, Calif.
 Quick Heat—Furnaces, Heaters. American Stove Co., St. Louis, Mo.
 Quick Heat—Heating Equipment. Tjernlund Mfg. Co., St. Paul, Minn.
 Quick Heater—Oil Burners, Furnaces, Stokers. Quick Furnace & Supply Co., Des Moines, Iowa.
 Quick-Set—Dividers and Notchers. Reinert & Campbell Co., Inc., Elizabeth, N. J.
 Quick-Set—Waterproofing. American Fluoresit Co., Cincinnati, Ohio.
 Quickwork—Shears and Sheet Metal Machines. Whiting Corp., Harvey, Ill.
 Quiet Flame—Oil Burners. Volcano Burner Corp., New York, N. Y.
 Quiet Kool—Air Conditioning Units. Quiet-Heat Mfg. Corp., Newark, N. J.
 Quiet May—Oil Burners, Oil Furnaces. May Oil Burner Div., Gerotom May Corp., Baltimore, Md.
 Quiet Zone—Blowers. Palmer Mfg. Co., Phoenix, Ariz.
 Quik-Shot—Soldering Iron. Kemode Mfg. Co., New York, N. Y.
 Quilt—Insulation. Samuel Cabot, Inc., Boston, Mass.
 Q-T Ductliner—Celotex Corp., Chicago, Ill.

R

Racine—Stokers. Nelson Bros. & Strom Co., Racine, Wis.
 Radiant—Heaters. Phillips & Buttorff Mfg. Co., Nashville, Tenn.
 Radiant Comfort—Gas Burners. Van's Gas Burner Service, Detroit, Mich.
 Radiant Tile—Floor Tile. Cannelton Sewer Pipe Co., Cannelton, Ind.
 Radiation Discs—Stoker Baffles. Munn and Steele, Inc., Newark, N. J.
 Radi-Ion—Ozone Apparatus. Montgomery Bros., San Francisco, Calif.
 Radius Master—Templates. Rapidesign, Inc., Glendale, Calif.
 Radolite—Insulating Cement and Refractories. Pyrolite Products Co., Cleveland, Ohio.
 Raintite—Roof Ventilators. Aeolus Dickinson, Chicago, Ill.
 Ramco—Chimney Caps and Tops. Ventilators. Royal-Apex Mfg. Corp., Brooklyn, N. Y.
 Ramfeed—Stokers. Canton Stoker Corp., Canton, Ohio.
 Ranarex—CO₂ Analyzers. Permutit Co., New York, N. Y.
 Range-Ventor—Fans. Universal Blower Co., Birmingham, Mich.
 Rawl-Anchors—Bolts. Rawlplug Co., Inc., New York, N. Y.
 Rawl-Drive—Masonry Nails and Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
 Rawl-Tapers—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
 Reale-Heat—Furnaces. Peerless Sales and Supply, Lincoln, Nebr.
 Reco—Coils. Roessing Mfg. Co., Pittsburgh, Pa.
 Reco—Fans, Motors, Buffers, Relays and Switches. Reynolds Electric Co., River Grove, Ill.
 Recoy—Air Conditioning Units and Coils. Refrigeration Economics Co., Inc., Canton, Ohio.
 Red Cap—Spinner Ventilator. Warner Ventilator Co., LaGrange, Ind.
 Red Crown—Domestic Water Heaters. Hynes & Cox Electric Corp., Albany, N. Y.
 Red Devil—Furnace Cement. Pecora Paint Co., Philadelphia, Pa.
 Red End—Saws. Simonds Saw & Steel Co., Fitchburg, Mass.
 Red Metallic—Roofing Paint. Clinton Metallic Paint Co., Clinton, N. Y.
 Red-Reading-Mercury—Hygrometers, Psychrometers and Thermometers. The Palmer Thermometers, Inc., Cincinnati, Ohio.
 Red Seal—Sheets. Benjamin Wolff and Co., Chicago, Ill.
 Red Streak—Shear Blades. Simonds Saw & Steel Co., Fitchburg, Mass.
 Red Top—Insulation. United States Gypsum Co., Chicago, Ill.
 Red Top—Thermostats. H-B Instrument Co., Philadelphia, Pa.
 Red X—Cleaners and Polishers. Turco Products, Inc., Los Angeles, Calif.
 Reddy-On—Furnace Door Closes. Leisur-Maid Mfg. Corp., Grand Rapids 3, Mich.
 Redi—Stokers. General Machinery Co., Spokane, Wash.
 Redi-Nail—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, Ohio.
 Redi-Paint—Sheet Metal Paint. Turco Products, Inc., Los Angeles, Calif.
 Redi-Set—Sheet Metal Workers' Tools. Whitney Metal Tool Co., Rockford, Ill.
 Rego—Brazing Torches. National Cylinder Gas Co., Chicago, Ill.
 Rego—Flux. Bastian-Blessing Co., Chicago, Ill.
 Reilaloy—Stove and Furnace Repairs. Pittsburgh Furnace Parts Co., Pittsburgh, Pa.
 Renu-Vent—Steel Wool Filters. American Air Filter Co., Inc., Louisville, Ky.
 Repco—Furnaces. Republic Products Co., Philadelphia, Pa.
 Republic—Gas Conversion Burners. Autogas Corp., Chicago, Ill.
 Republic-Taylor—Terne Roofing Plates. Republic Steel Corp., Cleveland, Ohio.
 Resiscrete—Paint. Reilly Tar & Chemical Corp., Indianapolis, Ind.
 Rex—Bearings, Pillow Blocks, Blower-Filter Units, Blowers, Fan-Filter Units, Blower Wheels. Air Controls Inc., Cleveland, Ohio.
 Rex—Bearings and Nozzles. Chain Belt Co., Milwaukee, Wis.
 Rex—Controls, Draft Diverters, Water Heaters. Cleveland Heater Co., Cleveland, Ohio.
 Rex—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
 Rex-Airate—Fans, Ventilators. Air Controls, Inc., Cleveland, Ohio.
 Rex-Air-Pak—Blower Units. Air Controls, Inc., Cleveland, Ohio.
 Rex-Flex—Flexible Duct Connectors. Chicago Metal Hose Corp., Maywood, Ill.
 Rex Junior—Welders. Rex Welder & Engineering Co., Kansas City, Mo.
 Rex-Tube—Flexible Duct Connectors. Chicago Metal Hose Corp., Maywood, Ill.
 Rex Vibra-Sorbers—Vibration Eliminating Metal Hose. Chicago Metal Hose Corp., Maywood, Ill.
 Rex-Weld—Flexible Duct Connectors. Chicago Metal Hose Corp., Maywood, Ill.
 Rex-Weld Unimetal—Flexible Hose. Chicago Metal Hose Corp., Maywood, Ill.
 Rexarc—Welding Electrodes, Welding Rods. Sight Feed Generator Co., West Alexandria, Ohio.
 Rexco—Refractories. Rex-Roto Corp., Detroit, Mich.
 Rexide—Metal Protecting Paint. A. C. Horn Co., Inc., Long Island City, N. Y.
 Rexoil—Oil Burners and Furnaces. Reif-Rexoil, Inc., Buffalo, N. Y.
 Rexwelders—Spot Welders. Rex Welder & Engineering Co., Kansas City, Mo.
 Rezistal—Stainless Steels. Crucible Steel Co. of America, New York, N. Y.
 R & G—Grilles. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
 Rheotrol—Horizontal Oil Burners. Brees Burners, Inc., Chicago, Ill.
 Rhinamel—Enamels. Tropical Paint & Oil Co., Cleveland, Ohio.
 R & I—Furnace Cement and Insulation, Baffles, Combustion Chambers. Refractory & Insulation Corp., New York, N. Y.
 Ridgevent—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
 Ridgulator—Ridge Roof Ventilator. Klauer Mfg. Co., Dubuque, Iowa.
 Rigid—Hack Saw Frames. Machine Rebuilding Co., Detroit, Mich.
 Rip-o-Lin—Enamels. Glidden Co., Cleveland, Ohio.
 Ripple Fin—Coils. McQuay, Inc., Minneapolis, Minn.
 Ripple Tube—Coils. McQuay, Inc., Minneapolis, Minn.
 River Breeze—Exhausters and Fans. Kloppenborg Aluminum Fdry., Davenport, Iowa.
 Rivnut—Blind Fasteners. B. F. Goodrich Co., Akron, Ohio.
 R.I.W.—Paints and Waterproofing. Toch Bros., Inc., Staten Island, N. Y.
 R. M.—Slip Roll Forming Machines. Riverside Machinery Co., Minneapolis, Minn.
 R & M—Cranes, Motors, Ventilators. Robbins & Meyers, Inc., Springfield, Ohio.
 Roberts—Floor Furnace. Bone Tool & Gauge Co., Detroit, Mich.
 Robinson—Presses. New Albany Machine Mfg. Co., New Albany, Ind.
 Rockwell-EMCO—Gas Pressure Regulating Valve. Pittsburgh Equitable Meter Div., Rockwell Mfg. Co., Pittsburgh, Pa.
 Rol-Away—Carrier Beall Pipe & Tank Corp., Portland, Ore.
 Rollaire—Air Conditioning Furnaces. Hipoint Corp., Bellefontaine, Ohio.
 Roof Flange—Flashing. Eagle-Picher Co., Cincinnati, Ohio.
 Roofkoter—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
 Roof saver—Roof Cement. Baer Brothers, New York, N. Y.
 Rotary—Ventilators. Swartwout Co., Cleveland, Ohio.
 Roto—Insulating Cement and Combustion Chambers. Rex-Roto Corp., Detroit, Mich.
 Roto-Clone—Dust Collectors. American Air Filter Co., Inc., Louisville, Ky.
 Rotoflame—Oil Burners. Oil Equipment Laboratories, Inc., Elizabeth, N. J.
 Rotojet—Nozzles. Binks Mfg. Co., Chicago, Ill.
 Roxaprene—Enamels and Lacquers. Roxaline Flexible Finishes, Inc., Elizabeth, N. J.
 Royal—Furnaces. Hart & Crouse Corp., Oneida, N. Y.
 Royal—Space Heaters. Chattanooga Implement & Mfg. Co., Chattanooga, Tenn.

Royal—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
 Royal Blue—Acid and Furnace Brushes. Schaefer Brush Mfg. Co., Milwaukee, Wis.
 Royal Clipper—Metal Cutter. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.
 Royalastic—Roof Cement. A. Wilhelm Co., Reading, Pa.
 R-P—Filters. Research Products Corp., Madison, Wis.
 RPM—Paint and Roofing Steel. H. H. Robertson Co., Pittsburgh, Pa.
 R-R-M—Hygrometers, Psychrometers, Thermometers. Palmer Thermometers, Inc., Cincinnati, Ohio.
 Rubalt—Paints. Alfred Hague & Co., Brooklyn, N. Y.
 Rubber-In-Shear—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.
 Rubyfluid—Solder, Soldering Flux. Ruby Chemical Co., Columbus, Ohio.
 Rudico—Furnaces. Rudy Furnace Co., Dowagiac, Mich.
 Rudisteel—Furnaces. Rudy Furnace Co., Dowagiac, Mich.
 R-U-F—Fans. Reed Unit-Fans, Inc., New Orleans, La.
 Rusco—Windows. F. C. Russell Co., Cleveland, Ohio.
 Rust Bloc No. 20—Coating. Turco Products, Inc., Washington, D. C.
 Rust Sol—Metal Cleaner. Klem Chemicals, Inc., Dearborn, Mich.
 Rustmil—Paints. National Engineering Products, Inc., Washington, D. C.
 Rustrem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.
 Rysdon—Ventilators. Sioux Steel Co., Sioux Falls, S. D.
 Rystrom—Fuel Oil Pumps. Polo Pump Co., Polo, Ill.

S

Saf-Aire—Furnaces. South Wind Div. Stewart-Warner Corp., Indianapolis, Ind.
 Saf-Aire—Wall Furnaces. Heating Research Corp., Muncie, Ind.
 Safe-Hi—Ladder Shoes. Rose Mfg. Co., Denver, Colo.
 Safety Circle—Motors. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 St. Clair—Circulating Heaters. Enterprise Foundry, Inc., Belleville, Ill.
 St. Louis—Stoker. Ormsby-Osterman Co., St. Louis, Mo.
 Sai-Mo—Cement, Insulation, Pipe Coverings. Sall Mountain Co., Chicago, Ill.
 Samco—Cement. Standard Asbestos Mfg. Co., Chicago, Ill.
 Samco—Floor Furnaces and Space Heaters. Samuel Stamping & Enameling Co., Chattanooga, Tenn.
 Sampson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
 Sanders—Floor Furnace. Ford Blow Pipe & Mfg. Co., Memphis, Tenn.
 Satinco—Building Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
 Sav-A-Tank—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.
 Sav-Haf—Oil Burners. Breeze Corps., Inc., Newark, N. J.
 Saw-Chief—Hack Saws. Chicago Precision Machine Co., Chicago, Ill.
 Saw Gun—Portable Hack Saw. Mid-States Welder Mfg. Co., Chicago, Ill.
 Sax—Oil Burners. Aldrich Co., Wyoming, Ill.
 SC—Furnaces, Heaters. Surface combustion Corp., Toledo, Ohio.
 Schild-Bilt—Attic Fans. Fresh Air Circulator Co., Houston, Tex.

Schmidt—Soldering Coppers, Soldering and Brazing Torches. Minn-Koja Foundry & Mfg. Co., Fargo, N. D.
 Sco-Co—Roof Cement, Caulking Compounds, Paint, Waterproofing. Southport Paint Co., Savannah, Ga.
 Scotsman—Heaters, Furnaces. American Gas Machine Co., Albert Lea, Minn.
 Screw-Tite—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
 Scribus-Dividers—Scribers, Dividers, Calipers, Wiggler. Nork Products Co., Los Angeles, Calif.
 Scrugon—Automatic Screw Driver. Black & Decker Mfg. Co., Towson, Md.
 S.D.T.—Freeze Proof—Coils. John J. Nesbitt, Inc., Philadelphia, Pa.
 S-E—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
 Sea Lion—Leather Belting. Chicago Belting Co., Chicago, Ill.
 Seal Master—Bearings. Stephens-Adamson Mfg. Co., Aurora, Ill.
 Seal of Quality—Roofing. Columbia Steel Co., San Francisco, Calif.
 Seal-Tite—Registers. Char-Gale Mfg. Co., Minneapolis, Minn.
 Seamless—Furnaces. Waterman-Waterbury Co., Minneapolis, Minn.
 Seasonmaker—Air Conditioning Units, Evaporative Coolers. McQuay, Inc., Minneapolis, Minn.
 Security—Caulking Compounds and Felt Roofing. National Mfg. Corp., Tonawanda, N. Y.
 Seismo-Dampers—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
 Selectair—Air Conditioning Units and Oil Furnaces. S. T. Johnson Co., Oakland, Calif.
 Selectric—Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
 Self-Seal—Filters. Research Products Corp., Madison, Wis.
 Sells—Bearings. Royersford Foundry & Machine Co., Royersford, Pa.
 Seneca—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Sensatherm—Thermostats. Mercoid Corp., Chicago, Ill.
 Sensitrol—Electrical Relays. Weston Electrical Instrument Corp., Newark, N. J.
 Sentinel—Floor Furnaces. Stoker-Lad Co., Tacoma, Wash.
 Sentinel—Water Heaters. General Water Heater Corp., Burbank, Calif.
 Sentry—Barometric Dampers. Krueger Sentry Gauge Co., Green Bay, Wis.
 Sentry—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
 Service-Master—Truck Bodies. McCabe Powers Auto Body Co., St. Louis, Mo.
 SGP—Gas Conversion Burners. Security Mfg. Co., Kansas City, Mo.
 Shallo-Well—Floor Furnace. Oran Co., Columbus, Ohio.
 Shawburnize—Gas Conversion Burners. Central States Mfg. Co., Inc., Arkansas City, Kansas.
 Shawnee—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Shelby—Tubing. National Tube Co., Pittsburgh, Pa.
 Shield-Arc—Electrodes and Welders. Lincoln Electric Co., Cleveland, Ohio.
 Shipley—Air Conditioning Units. York Shipley, Inc., York, Pa.
 Shock Absorbing—Pillow Blocks. Tri-angle Mfg. Co., Oshkosh, Wis.
 Shorty—Furnaces. John Zink Co., Tulsa, Okla.
 Shower-Proof—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.

Shut-O-Vent—Louvers and Shutters. Reed Unit-Fans, Inc., New Orleans, La.
 Sierra Air—Evaporative Coolers. International Sales Co., San Francisco, Calif.
 Sievert—Soldering Furnaces and Torches. J. A. Sanders, Fulton, N. Y.
 Sil-Fos—Solder. Handy & Harman, New York, N. Y.
 Silbond—Electrodes. Universal Welder Corp., Cleveland, Ohio.
 Silent—Blowers. Air Conditioning Equipment Co., Minneapolis, Minn.
 Silent—Furnaces. Jacob Brenner Co., Fond du Lac, Wis.
 Silent Automatic—Louvers and Shutters. Airecon Industries, Detroit, Mich.
 Silent Automatic—Shutters. Meyer Mfg. Co., Detroit, Mich.
 Silent Breeze—Fans. Holcomb & Hoke Mfg. Co., Indianapolis, Ind.
 Silent Korth—Oil Burners. Eckhart Mfg. Co., Inc., Union, N. J.
 Silent Star—Oil Burners. Mechanical Products Co., Seattle, Wash.
 Silentaire—Window Ventilator and Filter Units. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
 Silenblu—Gas Burners. Beck Engineering Combustion Company, St. Louis, Mo.
 Silenbvane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Silicon Bronze—Bolts. Chase Brass & Copper Co., Inc., Waterbury, Conn.
 Siloo—Fuel Oil Tank Solvent. Petroleum Solvents Corp., New York, N. Y.
 Siloy-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
 Silver-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
 Silver Steel—Band Saw and Hack Saw Blades. E. C. Atkins & Co., Indianapolis, Ind.
 Simplex—Flashing. Keystone Flashing Co., Philadelphia, Pa.
 Sim-trol—Barometric Dampers. Simplex Mfg. Co., Fond du Lac, Wis.
 Single-Ten—Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
 Sioux—Drills, Grinders, Sanders, Albertson & Co., Inc., Sioux City, Iowa.
 Sirocro—Air Conditioning Units, Blowers, Washers. American Blower Corp., Detroit, Mich.
 S. I. S.—Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
 Sisalation—Reflective Insulation. Sisal-kraft Co., Chicago, Ill.
 Skil—Buffers, Grinders, Drills, Hammers, Hack Saws, Portable Shears, Sheet Metal Tools. Skilaw, Inc., Chicago, Ill.
 S-L—Bar Folders, Nibblers, Slitting Machines. St. Louis Tool Co., St. Louis, Mo.
 Slo-Speed—Motors. Sterling Electric Motors, Inc., Los Angeles, Calif.
 Smith's—Cleat Benders. R. E. Smith, Waukegan, Ill.
 Smithway—Water Storage Heaters, Stokers, Welders. A. O. Smith Corp., Milwaukee, Wis.
 Smithway-Burkay—Gas Conversion Burners. A. O. Smith Corp., Toledo, Ohio.
 Smokabator—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.
 Smoothcote—Building Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
 S-N—Air Conditioning Units, Furnaces, Oil Burners. Scott-Newcomb, Inc., St. Louis, Mo.
 Snap Action—Humidifier Valves. McDonnell & Miller, Inc., Chicago, Ill.

Snap-Clips—Spring Fastenings. Cuyahoga Spring Co., Cleveland, Ohio.
 Snap-Lock—Clamp Pliers. Seymour Smith & Son, Inc., Oakville, Conn.
 Snap-Rite—Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.
 Snaplok—Furnace Pipe. Reeves Steel & Mfg. Co., Dover, Ohio.
 Snaptite—Gutter Fittings. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
 Sno-Breze—Coils, Evaporative Coolers. Palmer Mfg. Corp., Phoenix, Ariz.
 Sno-Fluf—Evaporative Cooler Mats. Palmer Mfg. Corp., Phoenix, Ariz.
 So Salts—Flux. Turco Products, Inc., Los Angeles, Calif.
 Soder—Soldier. L. B. Allen Co., Inc., Chicago, Ill.
 Softweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Sol-Flux—Soldering Flux. Klem Chemical Works, Dearborn, Mich.
 Solair—Heat Pump. Northwest Heating, Inc., Portland, Ore.
 Sola-Flame—Oil Burners. East Coast Co., Boston, Mass.
 Solar Flame—Oil Burners. United States Radiator Corp., Detroit, Mich.
 Solaraire—Air Conditioning Furnace. St. Louis Furnace Mfg. Co., St. Louis, Mo.
 Solder-Matic—Soldering Iron Attachment. Nelpin Mfg. Co., Long Island City, N. Y.
 Solderprep—Flux for Steel. Neilson Chemical Co., Detroit, Mich.
 Solex—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
 Solid Comfort—Furnaces. May-Fieberger Co., Newark, Ohio.
 Sonolastic—Asphalt Paint. L. Sonneborn Sons, Inc., New York, N. Y.
 Sootractor—Soot Remover. Metropolitan Refining Co., Inc., Long Island City, N. Y.
 Soroco—Chimney Caps and Tops. Southbridge Roofing Co., Inc., Southbridge, Mass.
 Southaire—Pipe Fittings, Stokers, Furnaces. E. E. Souther Iron Co., St. Louis, Mo.
 Southern-Aire—Space Heaters. Southern Aircraft Co., Garland, Tex.
 Southco—Bolts, Fastenings, Rivets. South Chester Corp., Philadelphia, Pa.
 Sovabead—Dehumidifier. Socony-Vacuum Oil Co., New York, N. Y.
 Southway—Heaters. A. O. Smith Corp., Milwaukee, Wis. & Toledo, Ohio.
 Sovaklor—Metal Protecting Paint. Socony Paint Products, New York, N. Y.
 Sovalex—Metal Protecting Paint. Socony Paint Products, New York, N. Y.
 Spacesaver—Suspended Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.
 Spartan—Water Heaters. Continental Water Heater Co., Ltd., Los Angeles, Calif.
 Special X—Flux. Industrial Service Laboratories, Milwaukee, Wis.
 Speco—Soldering Flux. Pfanstiel Chemical Co., Waukegan, Ill.
 Spee Dee—Coils. Air Controls, Inc., Cleveland, Ohio.
 Speed Clamps—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
 Speed Clips—Spring Steel Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
 Speed Grips—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed-heat—Furnaces. Marshall Furnace Co., Marshall, Mich.
 Speed Nuts—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.
 Speed-Trol—Transmissions, Motors, Sterling Electric Motors, Inc., Los Angeles, Calif.
 Speedmaster—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.
 Speedweld—Welding Electrodes. Trindl Products, Ltd., Chicago, Ill.
 Sphinx—Gas Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.
 Sphinxette—Gas Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.
 Spinner—Ventilators. Inland Steel Products Co., Milwaukee, Wis.
 Spiralok—Pulleys. Scientiae Tool Co., Dayton, Ohio.
 Spiratube—Flexible Duct Connections and Non-Metallic Fittings. Flexible Tubing Corp., Guilford, Conn.
 Spirovane—Fans. Western Blower Co., Seattle, Wash.
 Spitfire—Water Heater. Security Mfg. Co., Kansas City, Mo.
 Spongex—Vibration Isolating Pads. Sponge Rubber Products Co., Shelton, Conn.
 Spot-Aire—Room Type Air Conditioning Units. Drayer-Hanson, Inc., Los Angeles, Calif.
 Spra-Rite—Nozzles. Binks Mfg. Co., Chicago, Ill.
 Sprague—Furnaces. Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.
 Spray-Acoustic—Insulation. Sprayo-Flake Co., Chicago, Ill.
 Spray-Cote—Insulation. Sprayo-Flake Company, Chicago, Ill.
 Spraco—Spray Guns, Humidifiers, Nozzles, Air Washers. Spray Engineering Co., Somerville, Mass.
 Sprayit—Paint Guns, Humidifiers, Nozzles. Electric Sprayit Co., Sheboygan, Wis.
 Spraymaster—Paint Spray Guns. Portable Electric Tools, Inc., Chicago, Ill.
 Spraywelder—Metal Spray Guns. Wall Colmonoy Corp., Detroit, Mich.
 Springin—Toggle Bolts. Star Expansion Bolt Co., New York, N. Y.
 Spunsteel—Pulleys. Spun Steel Corporation, Canton, Ohio.
 S.R.P. 75—Sheet Metal Paint. L. Sonneborn Sons, Inc., New York, N. Y.
 S.R.P. 87—Sheet Metal Paint. L. Sonneborn Sons, Inc., New York, N. Y.
 Ssirco—Cutter and Accessories. Ridge Roll, Roofing, Metal Shingles and Tile. Southern States Iron Roofing Co., Savannah, Ga.
 ST-type—Gas Burner Pilots. John Zink Co., Tulsa, Okla.
 Sta-Lok—Prefabricated Ducts and Duct Fittings. Chicago Furnace Supply Co., Chicago, Ill.
 Stable-Arc—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Stack-O-Meter—CO₂ Analyzer. Davis Emergency Equipment Co., Newark, N. J.
 Stackmaster—Furnace Regulator. Campbell Eng. Co., Appleton, Wis.
 Stainlend—Electrodes. Arcos Corp., Philadelphia, Pa.
 Stainless Heat—Furnaces. Heating Specialties Co., Baltimore, Md.
 Stainless 20—Stainless Clad Sheets. Lukens Steel Co., Coatesville, Pa.
 Stainaloy—Electrodes. Acme Electric Welder Co., Los Angeles, Calif.
 Stainweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Stamco—Furnace Pipe, Fittings. Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.

Stamco—Sheet and Plate Machinery. Streine Tool & Mfg. Co., New Bremen, Ohio.
 Standard—Furnace. Farris Furnace Co., Springfield, Ill.
 Standard—Furnaces. Home Furnace Co., Holland, Mich.
 Standard—Furnaces. Williamson Heater Co., Cincinnati, Ohio.
 Standard I.F.B.—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.
 Standard Stationary—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
 Standco—Pillow Blocks. Standard Pressed Steel Co., Jenkintown, Pa.
 Standforated—Grilles. Standard Stamping & Perforating Co., Chicago, Ill.
 Standflame—Gas Burners. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Star—Hack Saw Blades. Clemson Bros., Inc., Middletown, N. Y.
 Star—Oil Burners. Mechanical Products Co., Seattle, Wash.
 Statick—Ventilators. Hirschmann-Pohle Co., Inc., LeRoy, N. Y.
 Staxausters—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
 Staynew—Air Filters. Dollinger Corp., Rochester, N. Y.
 Steel-Bound Cork—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.
 Steel Cable—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
 Steel City—Furnaces. Ruby Management Co., Pittsburgh, Pa.
 Steel-Fin—Heating Coils. New York Blower Co., Chicago, Ill.
 Steel Weld—Furnaces. Jacob Brenner Co., Fond du Lac, Wis.
 Steelco—Gutter Guards. Steele Mfg. Co., Ashland, Ky.
 Steelfab—Squaring Shears & Presses. Highland Engineering Co., Santa Monica, Calif.
 Steelweld—Brakes, Presses and Dies, Shears. Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, Ohio.
 Ster-O-Zone—Ozone Apparatus. Norwood Filtration Co., Holyoke, Mass.
 Sterilator—Germicidal Lamps. Domestic Devices, Cleveland, Ohio.
 Sterling—Evaporative Coolers and Compressors. Reynolds Mfg. Co., Springfield, Mo.
 Sterling Beader—Beading Machines. F. L. Robertson, Buffalo, N. Y.
 Steward—Brakes, Benders. Ward Machinery Co., Chicago, Ill.
 Stic-Tite—Cement. Refractory & Insulation Corp., New York, N. Y.
 Stok-A-Fire—Furnaces, Stokers. Automatic Firing Corporation, St. Louis, Mo.
 Stok-A-Timer—Stoker Controls. Mercoid Corp., Chicago, Ill.
 Stokabilt—Air Conditioning Stoker Furnaces. American Foundry & Furnace Co., Bloomington, Ill.
 Stoker-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.
 Stokerator—Domestic Stokers. Northern Steel & Stoker Corp., Peoria, Ill.
 Stokerelay—Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
 Stokol-Hydraulic—Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.
 Stokol-Mercury—Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.

Stonewall—Asbestos-Cement Board. Ruberoid Co., New York, N. Y.
 Stop-It—Waterproofing. Tamms Industries Inc., Chicago, Ill.
 Storm King—Furnace Pipe. Smoke Pipe, and Fittings. Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
 Storm-Pruf—Air Burner Vent Caps. Bearlee Products Co., Green Bay, Wis.
 Storm-Seal—Fittings and Accessories. Lyon-Conklin & Co., Inc., Baltimore, Md.
 Stormseal—Roofing Steel. Columbia Steel Co., San Francisco, Calif., and American Steel and Wire Co., Cleveland, Ohio.
 Stormtight—Roof Cement and Paint. L. Sonneborn Sons, Inc., New York, N. Y.
 Stowaway—Suspended Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
 Strato-Liminator—Air Diffusers. Wilster, Inc., Cleveland, Ohio.
 Streamjet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
 Streamline—Ridge Ventilators. H. H. Robertson Co., Pittsburgh, Pa.
 Streamline—Copper Tubing and Fittings. Mueller Brass Co., Port Huron, Mich.
 Streamlined—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.
 Streamlined—Oil Burners. Shedd Oil Burners, Inc., Minneapolis, Minn.
 Streamliner—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
 Streeko—Register Packing. Excel Heating & Air Conditioning Co., Chicago, Ill.
 Strongbarn—Corrugated Steel Roofing. Granite City Steel Co., Granite City, Ill.
 Stronghold—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
 Stubby—Floor Furnace. Holly Mfg. Co., Pasadena, Calif.
 Stud-Pak—Insulation. United States Mineral Wool Co., South Milwaukee, Wis.
 Sturdybender—Presses, Brakes. Cyril Bath & Co., Cleveland, Ohio.
 STV—Gas Burners. John Zink Co., Tulsa, Okla.
 Styx—Roof Cement. Coopers Creek Chemical Corp., West Conshohocken, Pa.
 Sun Blaze—Furnaces. Harvey-Whipple, Inc., Springfield, Mass.
 Sun-Burst—Furnaces. Delta Heating Corp., Jackson Hts., L. I., N. Y.
 Sun Fuel Master—Furnaces. J. V. Paten Co., Sycamore, Ill.
 Sunburst—Gas Burners. Taylor Appliance & Mfg. Co., Royal Oak, Mich.
 Super—Drill Grinders. Crandall Mfg. Co., Los Angeles, Calif.
 Super—Hangers and Fittings. Royal Apex Mfg. Corp., Brooklyn, N. Y.
 Super—Heaters. Evans Products Co., Detroit, Mich.
 Super—Plastic Furnace Lining. Walsh Refractories Corp., St. Louis, Mo.
 Super Air Screws—Ventilating Fans. Marathon Electric Mfg. Corp., Wau-sau, Wis.
 Super Cycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
 Super Firma—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
 Super-Heat—Gas Burners. Brown-Hart Engineering Corp., Hazel Park, Mich.
 Super-Jet—Soldering Torches. Fusion Engineering, Cleveland, Ohio.
 Super-Nickel—Fittings. American Brass Co., Waterbury, Conn.
 Super-Por-Seal—Waterproofing. Truscon Laboratories, Detroit, Mich.

Super Red Streak—Furnace Cleaners. National Super Service Co., Inc., Toledo, Ohio.
 Super Saw—Power Saws. RCS Tool Sales Corp., Joliet, Ill.
 Super Sioux—Ventilators. Sioux Steel Co., Sioux Falls, S. D.
 Super 66—Insulation. Eagle-Picher Co., Cincinnati, Ohio.
 Super Slugger—Electric Power Hammers. Noble & Stanton, Bedford, Ohio.
 Super Speed—Mouldings and Trim. Appleton Supply Co., Inc., Appleton, Wis.
 Super-Spud—Stokers. Wm. Bros. Boiler & Mfg. Co., Minneapolis, Minn.
 Super Steel—Furnaces. Williamson Heater Co., Cincinnati, Ohio.
 Super-Thermo—Combustion Chambers, Refractories. Chicago Fire Brick Co., Chicago, Ill.
 Super-Vacuum—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
 Super-X—Roofing Nails. Republic Steel Corp., Cleveland, Ohio.
 Super X—Sheets. Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.
 Superair—Air Conditioning Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.
 Superair—Blower-Filter Units. Majestic Co., Huntington, Ind.
 Superdraft—Blowers. Perfection Stove Co., Cleveland, Ohio.
 Superfelt—Insulation. Johns-Manville, New York, N. Y.
 Superflex—Furnaces, Heaters, and Gas Burners. Perfection Stove Co., Cleveland, Ohio.
 Superfin—Furnaces. American Fdry. & Furnace Co., Bloomington, Ill.
 Superflame—Blowers, Gas Burners and Furnaces. Queen Stove Works, Inc., Albert Lea, Minn.
 Superflux—Soldering Flux. Paul Lewis Laboratories, Inc., Milwaukee, Wis.
 Superhot—Water Heaters. SuperBO Mfg. Co., Los Angeles, Calif.
 Superior—Enamels. Blue Ridge Talc Co., Inc., Henry, Va.
 Superior—Blowers. American Foundry & Furnace Co., Bloomington, Ill.
 Superior—Storage Water Heaters. Bastian-Morley, Inc., LaPorte, Ind.
 Superior—Water Heaters. Crane Co., Chicago, Ill.
 Superloy—Electrodes. Acme Electric Welder Co., Los Angeles, Calif.
 Supermetac—Compressors. Servel, Inc., Evansville, Ind.
 Supersteel—Furnaces. Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
 Supertemp—Insulation. Eagle-Picher Co., Cincinnati, Ohio.
 Supreme—Combustion Chambers. Sandberg Mfg. Co., Portland, Ore.
 Supreme—Enamels. Blue Ridge Talc Co., Inc., Henry, Va.
 Supreme—Furnaces. American Furnace & Foundry Co., Milan, Mich.
 Supreme—Furnaces, Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.
 Supreme—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.
 Sure Draft—Chimney Tops. H. C. Little Burner Co., Inc., San Rafael, Calif.
 Sure-Foot—Ladder Base. Akron Steel Sales, Inc., Akron, Ohio.
 Surefit—Ducts, Fittings, Furnace and Smoke Pipe, and Fittings. Henry Furnace Co., Medina, Ohio.
 Surety—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Sureweld—Welding Electrodes, Welders. National Cylinder Gas Co., Chicago, Ill.
 Surfaceweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.

SuVeneer—Clad Sheets. Superior Steel Corp., Pittsburgh, Pa.
 Swanee—Galvanized Shingles. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
 Sylphon—Mechanical Draft Regulators and Thermostats. Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville, Tenn.
 Symentrex—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.
 Symonds—Registers. Front Rank Furnace Co., Div., Liberty Foundry Co., St. Louis, Mo.
 Synchro—Stoker Controls, Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.
 Syncrogear—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.

T

Table-Top—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.
 Tag—Controls, Humidistats, Hygrometers, Records, Psychrometers, Thermometers, Thermostats. Tagliabue Instruments Div., Weston Electrical Instrument Corp., Newark, N. Y.
 Tam-Putty—Caulking Compound. Tamms Industries Inc., Chicago, Ill.
 Tamarite—Metal Conditioner. Tamms Industries Inc., Chicago, Ill.
 Tamco—Ventilators. Tiffin Art Metal Co., Tiffin, Ohio.
 Tamtex—Paint. Tamms Industries Inc., Chicago, Ill.
 Tank-Kleen—Solvent. Celco Corp., New York, N. Y.
 Taperlock—Fan & Motor Pulleys. Dodge Mfg. Corp., Mishawaka, Ind.
 Tappan—Portable Electric Tapper. Black & Decker Mfg. Co., Towson, Md.
 Tarbestor—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Tate—Furnaces. State Steel Products, Inc., Los Angeles, Calif.
 Teejet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
 Tee Joint—Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
 Teg Conditioner—Blower-Filter Units. National Air Conditioning, Inc., Johnstown, Pa.
 Tel-Tru—Psychrometers, Thermometers, Air Testing Instruments. E. Vernon Hill & Co., Chicago, Ill.
 Telemaster—Relays. Tork Clock Co., Inc., Mount Vernon, N. Y.
 Tem-Clock—Clock Thermostats. Penn Electric Switch Co., Goshen, Ind.
 Temlok—Insulation. Armstrong Cork Co., Lancaster, Pa.
 Tempmaster—Thermostats. Crown Controls Co., Inc., New Bremen, Ohio.
 Tempoint—Thermometer. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
 Tempotool—Powder Operated Drills. Tempo Products Co., Cleveland, Ohio.
 Tempscribe—Portable Temperature Recorder. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
 Temtrol—Thermostats. Penn Electric Switch Co., Goshen, Ind.
 10-Plastic—Caulking Compounds, Quigley Co., Inc., New York, N. Y.
 Tennesseal—Steel Roof Decking. Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
 Tensilend—Electrodes. Arcos Corp., Philadelphia, Pa.
 Tension-Lap—Roofing Steel. Inland Steel Co., Chicago, Ill.
 Tensulate—Insulation. Tennessee Products & Chemical Corp., Nashville, Tenn.

- Texamo**—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
- Texpro**—V-Belts. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
- Tharco**—Furnace Cement. The Armstrong Co., Detroit, Mich.
- Thermo-Draulic**—Damper Motors. Perflex Corp., Milwaukee, Wis.
- Thermo-Drip**—Humidifier. Automatic Humidifier Co., Cedar Falls, Iowa.
- Thermo-Grip**—Soldering Coppers. Ideal Industries, Inc., Sycamore, Ill.
- Thermo-Humidigraph**—Humidity Recorders. Bristol Co., Waterbury, Conn.
- Thermotrol**—Thermometers. Wheelco Instruments Co., Chicago, Ill.
- Thermalfuel**—Furnaces. Beck Engineering Combustion Co., St. Louis, Mo.
- Thermaload**—Electrical Relays. Monitor Controller Co., Boston, Mass.
- Thermaster**—Furnaces. Thatcher Furnace Co., Garwood, N. J.
- Thermatube**—Duct Fittings. Flexible Tubing Corp., Guilford, Conn.
- Thermidaire**—Air Conditioning Units, Blowers, Coils, Fans, Furnaces, Louvers & Shutters. E. K. Campbell Heating Co., Kansas City, Mo.
- Thermo**—Furnaces. American Furnace Co., St. Louis, Mo.
- Thermo Lo**—Brazing Flux. Farrelloy Co., Philadelphia, Pa.
- Thermo-Blast**—Gas Burners. Rapid Heat Corporation, Detroit, Mich.
- Thermo-Trolation**—Roof Cooler. April Showers Co., Washington, D. C.
- Thermoanemometer**—Anemometer. Willson Products, Inc., Reading, Pa.
- Thermobloc**—Furnaces. Pratt-Daniel Corp., East Port Chester, Conn.
- Thermodraft**—Draft Regulators. No-No Specialty Co., Cleveland, Ohio.
- Thermodrive**—Blower Controls. Webster Electric Co., Racine, Wis.
- Thermogas**—Furnaces. Beck Engineering Combustion Company, St. Louis, Mo.
- Thermoil**—Furnaces. Beck Engineering Combustion Company, St. Louis, Mo.
- Thermoil-Granodine**—Coating Chemical for Steel or Iron Surfaces. American Chemical Paint Co., Ambler, Pa.
- Thermolux**—Water Heaters. Los Angeles Gas Appliance Co., Los Angeles, Calif.
- Thermopane**—Windows. Libby-Owens-Ford Glass Co., Toledo, Ohio.
- Thermopilot**—Controls. General Controls Co., Glendale, Calif.
- Thermoseal**—Insulating Windows. F. C. Russell Co., Cleveland, Ohio.
- Thermotex B**—Insulating Cement. Waterproofing, Philip Carey Mfg. Co., Cincinnati, Ohio.
- Thermotite**—Insulation. Coast Insulating Products, Los Angeles, Calif.
- Thin-Man**—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
- Thor**—Electric and Pneumatic Buffers, Nibblers, Hammers, Tools. Independent Pneumatic Tool Co., Aurora, Ill.
- 3-M**—Electric Grinders, Buffers, etc. Minnesota Mining & Mfg., Co., St. Paul, Minn.
- Three-Phase**—Welders. Sciaky Bros., Chicago, Ill.
- 370 Special**—Paints. Thompson & Co., Oakmont, Pa.
- Thrift**—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.
- Ti-Namel**—Vitreous Enameling Alloy Steel Sheets. Inland Steel Co., Chicago, Ill.
- Tik Wheat**—Pipe Covering Paste. Clark Stek-O Corp., Rochester, N. Y.
- Tilco-Fin**—Coils. David E. Kennedy, Inc., Brooklyn, N. Y.
- Tillery's**—Furnace Clock. Little Janitor Furnace Clock Co., New York, N. Y.
- Time-O-Switch**—Time Switches. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Timeroid**—Time Switches. Mercoid Corp., Chicago, Ill.
- Timerelay**—Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Tinezy**—Solder. Farrelloy Co., Inc., Philadelphia, Pa.
- Tinner's Red**—Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
- Tinol**—Soldering Flux. American Solder & Flux Co., Philadelphia, Pa.
- Tite-Lite**—Caulking Compound. Truscon Laboratories, Detroit, Mich.
- Titelock**—Fittings and Accessories for Conductor, Gutter, Furnace Pipe, Inland Steel Products Co., Milwaukee, Wis.
- TiteSeal**—Caulking Compounds. Radiator Specialty Co., Charlotte, N. C.
- Toastmaster**—Electric Water Heaters. McGraw Electric Co., Chicago, Ill.
- Tobin Bronze**—Plates and Welding Rod. American Brass Co., Waterbury, Conn.
- Toledo**—Presses and Dies. E. W. Bliss Company, Canton, Ohio.
- Toncan Iron**—Galv. Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
- Toolarc**—Welding Electrodes. Universal Welder Corp., Cleveland, Ohio.
- Toolmaster**—Grinders. Brown-Brockmeyer Co., Dayton, Ohio.
- Toolweld**—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
- Torchmaster**—Torches. Sully Engineering, Ltd., Los Angeles, Calif.
- Torchweld**—Torches. National Cylinder Gas Co., Chicago, Ill.
- Torridaire**—Furnaces. Fraser and Johnston Co., San Francisco, Calif.
- Torridmaster**—Conversion Burners. Modern Controls Corporation, Detroit, Mich.
- Torkmaster**—Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.
- Torkotherm**—Thermostats. Tork Clock Co., Inc., Mt. Vernon, N. Y.
- Tornado**—Furnace Vacuum Cleaners. Breuer Electric Mfg. Co., Chicago, Ill.
- Torrid Zone**—Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
- Totalume**—Aluminum Paint. Wilbur & Williams Co., Boston, Mass.
- Totrust**—Paints, Enamels. Wilbur & Williams Co., Boston, Mass.
- Tramrail**—Hoists, Monorails. Cleveland Tramrail Div., Cleveland Crane & Engr. Co., Wickliffe, Ohio.
- Transite**—Asbestos Cement Board, Pipe and Fittings. Johns-Manville, New York, N. Y.
- Transite Conduit**—Ducts and Duct Fittings. Johns-Manville, New York, N. Y.
- Transite Korduct**—Ducts and Duct Fittings. Johns-Manville, New York, N. Y.
- Transparent**—CO₂ Analyzers. F. W. Dwyer Mfg. Co., Chicago, Ill.
- Trapit**—Fuel Oil Filters. A-P Controls Corp., Milwaukee, Wis.
- Trentweld**—Steel Tubing. Crucible Steel Co. of America, New York, N. Y.
- Tri-Rib**—Steel Roof Deck. Wheeling Corrugating Co., Wheeling, W. Va.
- Tri-Core**—Flux, Solder. Alpha Metals, Inc., Brooklyn, N. Y.
- Tri-Flex**—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.
- Tri-Flux**—Soldering Flux. Wolfe-Kote Co., Sheboygan, Wis.
- Tri-Snips**—Multi-purpose Snips. Roto-Table Co., Dayton, Ohio.
- Triangle**—Water Heaters. Day & Night Div., Affiliated Gas Equipment Co., Inc., Monrovia, Calif.
- Tribloc**—Hoists. Ford Chain Block Div., American Chain and Cable Co., Inc., York, Penn.
- Triclene**—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
- Trico**—Draft Diverters, Furnaces. Tri-State Heating Supply Inc., Fort Wayne, Ind.
- Tricosol**—Waterproofing. American Fluoresit Co., Cincinnati, Ohio.
- Trimatic**—Gas Burner Pilots. Lowell & Grayson Mfg. Co., Monrovia, Calif.
- Trimmer Dampers**—Barometric Draft Control. Campbell Engineering Co., Appleton, Wis.
- Tripl-Lock**—Roofing Nails. The Deniston Co., Chicago, Ill.
- Tripl-life**—Furnaces. Williamson Heater Co., Cincinnati, Ohio.
- Triple A**—Paints, Enamels and Lacquers. Quigley Co., Inc., New York, N. Y.
- Triumph**—Water Heaters. Koil-Les Heater Co., Geneva, Ill.
- Trojan**—Furnaces and Stokers. Auburn Burner Co., Auburn, Ind.
- TroLaire**—Wall Furnaces. Form-Weld Co., Inc., San Francisco, Calif.
- Tropic Breeze**—Furnaces. Dalzen Tool & Mfg. Co., Detroit, Mich.
- Truliradiant**—Gas Burners. Sullivan Valve & Engineering Co., Butte, Mont.
- Trunkline**—Ducts and Duct Fittings. Norwalk Air Conditioning Corp., South Norwalk, Conn.
- Tub-Tite**—Caulking Compound. American Fluoresit Co., Cincinnati, Ohio.
- Tube-O-Flux**—Flux. Solder. American Products Corp., Chicago, Ill.
- Tuberator**—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.
- Tuf-Flex**—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.
- Tuffaloy**—Electrodes. Welding Sales & Engineering Co., Detroit, Mich.
- Tungsweld**—Shear Baldes. Simonds Saw & Steel Co., Fitchburg, Mass.
- Turb-O-Tube**—Furnace. Associates Engineering Co., Buffalo, N. Y.
- Turbine Rotary**—Ventilators. Western Engineering & Manufacturing Co., Los Angeles, Calif.
- Turbo**—Air Washers. Bayley Blower Company, Milwaukee, Wis.
- Turbovane**—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
- Twecotong**—Electrode Holders. Tweco Products Co., Wichita, Kan.
- Twin Contact**—Controls. Perflex Corp., Milwaukee, Wis.
- Twin Control**—Oil Burner. H. J. Hueller Mfg. Co., Inc., Brooklyn, N. Y.
- Twin-Eight**—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
- Twin-Fyr**—Oil Burner. Breeze Corps., Inc., Newark, N. J.
- Twin Rail**—Fan Base. Korfund Co., Inc., Long Island City, N. Y.
- Twindow**—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Two-Drain—Steel Roofing. Inland Steel Products Co., Milwaukee, Wis.
 Two-Tank-T—Fuel Filters. Robert Barclay Co., Chicago, Ill.
 Tygon—Metal Protecting Paint. U. S. Stoneware Co., Akron, Ohio.
 Tyl-Lyke—Steel Roofing and Siding. Continental Steel Corp., Kokomo, Ind.
 Tymotherm—Thermostats. Tork Clock Company, Inc., Mount Vernon, N. Y.
 Type X—Stainless Cleaner. Turco Products, Inc., Los Angeles, Calif.

U

U-Loy—Copper Bearing Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
 U-Set—Snips and Shears. W. H. Compton Shear Co., Newark, N. J.
 U Tube—Water Heaters. Handley Brown Heater Co., Jackson, Mich.
 Uclon—Sheet Metal Paint. United Chromium, Inc., New York, N. Y.
 U-G-L—Furnace Cement. United Gilsonite Laboratories, Scranton, Pa.
 Ultralite—Duct and Furnace Insulation. Gustin-Bacon Mfg. Co., Kansas City, Mo.
 UMCO—Furnaces. Union Mfg. Co., Boyertown, Pa.
 Uni-Fin—Grilles and Registers. Barber-Colman Co., Rockford, Ill.
 Uni-Flo—Grilles and Registers. Barber-Colman Co., Rockford, Ill.
 Uni-wash—Blow Pipe Collectors. Newcomb-Detroit Co., Detroit, Mich.
 Unichrome—Sheet Metal Paint. United Chromium, Inc., New York, N. Y.
 Uniclosed—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.
 Uniduct—Prefabricated Ducts. General Corporation, Minneapolis, Minn.
 Unifil—Insulation. Robinson Insulation Co., Great Falls, Mont.
 Uniflare—Copper Tube Fittings. Scovill Mfg. Co., Waterville Div., Waterville, Conn.
 Uniflow—Oil Burners. Ace Engineering Co., Chicago, Ill.
 Uniloy—Stainless Steel Sheets. Universal-Cyclops Steel Corp., Bridgeville, Pa.
 Unipack—Bowers, Exhaustors. American Machine Products Co., Marshalltown, Iowa.
 Unique—Air Conditioning Furnace. Excelsior Steel Furnace Co., Chicago, Ill.
 Unishear—Portable Electric Shears. Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
 Unisorb—Bases and Pads. Felters Co., Boston, Mass.
 Unitaire—Air Conditioning Units for Stores. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
 Unitaire—Gas Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.
 Universal—Angle Benders. Hossfeld Mfg. Co., Winona, Minn.
 Universal—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
 Universal—Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Unxld—Duct Damper Regulators. Parker-Kalon Corp., New York, N. Y.
 Upon—Rivets. Republic Steel Corp., Cleveland, Ohio.
 usAIRco—Air Conditioning Units, Blowers and Blower-Filter Units, Coils, Fans, Grilles, Washers and Blower Wheels. U. S. Air Conditioning Corp., Minneapolis, Minn.

U. S.—Oil Burner. Carlin Co., Wethersfield, Conn.
 USG—Built-Up Roofing and Roof Cement and Paint. United States Gypsum Co., Chicago, Ill.
 U.S.S. American—Nails and Wire. American Steel & Wire Co., Cleveland, Ohio.
 U.S.S.—Angles, Metal Ceilings, Nails, Copper Bearing and Stainless Steel Sheets. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
 U.S.S. Carillo—Alloy Plates. U. S. Steel Co., Pittsburgh, Pa.
 U.S.S. Columbia—Roofing, Sheets. Columbia Steel Co., San Francisco, Calif.
 U.S.S. Copper Steel—Subsidiaries U. S. Steel Corp., Pittsburgh, Pa.
 U.S.S. Cor Ten—Steel Plates. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
 U.S.S.—Nails, Roofing, Sheets, Plates, Wire. Subsidiaries, U. S. Steel Corp., Pittsburgh, Pa.
 U.S.S. Paintbond—Sheets. U. S. Steel Co., Pittsburgh, Pa.
 U.S.S.—Stainless Steel Tubing. National Tube Co., Pittsburgh, Pa.
 U.S.S. Stainless—Stainless Steel Sheets. U. S. Steel Co., Pittsburgh, Pa.
 U.S.S. Stormseal—Steel Roofing. U. S. Steel Co., Pittsburgh, Pa.
 U.S.S. Tennesseal—Roofing. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
 Utility—Fan Ventilator. Arex Co., Chicago, Ill.

V

V-Crimp—Roofing. Inland Steel Products Co., Milwaukee, Wis.
 V-Drain—Roofing. Tennessee Coal Iron & Railroad Co., Birmingham, Ala.
 V-Vent—Ventilators. Aeolus Dickinson, Chicago, Ill.
 Vackar—Furnace Vacuum Cleaners. Van Dorn Electric Tool Co., Towson, Md.
 Valcalox—Damper Regulators. Young Regulator Co., Cleveland, Ohio.
 Valdura—Caulking Compounds, Paint. American-Marietta Co., Chicago, Ill.
 Valley Forge—Cement. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
 Valvent—Ventilators. Swartwout Co., Cleveland, Ohio.
 Vanco—Skylights and Ventilators. E. Van Noorden Co., Boston, Mass.
 Vapoglas—Evaporative Humidifiers. Skuttle Mfg. Co., Detroit, Mich.
 Vapor-Oil—Burners and Furnaces. Automatic Furnace Co., Lansing, Mich.
 Vaporaire—Air Conditioners. Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
 Vaporseal—Waterproofing. Angier Corp., Farmingham, Mass.
 Vari-Pitch—Speed Changers. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 Varidrive—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.
 Veelos—V-Belts. Manheim Mfg. & Belting Co., Manheim, Pa.
 Velometer—Air Velocity Meters. Illinois Testing Laboratories, Inc., Chicago, Ill.
 Vent-Air—Blowers. Fried Air-Kool Co., Detroit, Mich.
 Vent-O-Matic—Kitchen Exhaust Fans. Simpson Screen Co., Oakland, Calif.
 Ventair—Fans. West Wind Corp., Seattle, Wash.
 Ventalarm—Fuel Tank Signal Gauge. Scully Signal Co., Cambridge, Mass.
 Ventfab—Flexible Duct Connections. Iden Co., Chicago, Ill.
 Ventilette—Fans. Diehl Manufacturing Company, Somerville, N. J.
 Ventrola—Ventilators, Fans. National Appliance Co., Detroit, Mich.
 Ventube—Rubberized Tubing. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
 Ventura—Fans, Ventilators. American Blower Corp., Detroit, Mich.
 Venturi-Flo—Air Diffusers, Ceiling Ventilators. Barber-Colman Co., Rockford, Ill.
 Vermiculite—Insulation. International Vermiculite Co., Girard, Ill.
 Vernois—Furnace Repair & Parts. Mt. Vernon Furnace and Mfg. Co., Mt. Vernon, Ill.
 Vernon—Punch Presses. Ran Corp., Richmond, Calif.
 Versa-Tool—Portable Electric Drill. York Electric and Machine Co., York, Pa.
 Verti-Bay—Coils. Vilter Mfg. Co., Milwaukee, Wis.
 Vibra-Cork—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
 Vibro-Bars—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
 Vibro Dampers—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
 Vibro-Insulators—Vibration Insulating Pads. B. F. Goodrich Co., Akron, Ohio.
 Vibro-Isolator—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
 Vi-Speed—Pneumatic Hammer. Van Products Co., Erie, Pa.
 Victor—Blower-Filter Units, Furnaces, Oil Burners, Stokers, Hall-Neal Furnace Co., Indianapolis, Ind.
 Victorgas—Gas Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.
 Victoroil—Oil Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.
 Victory—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
 Victron—Fans. Victor Electric Products, Inc., Cincinnati, Ohio.
 Vigorair—Furnaces. Marshall Furnace Co., Marshall, Mich.
 Vikimatic—Furnaces. Viking Manufacturing Corp., Cleveland, Ohio.
 Vincul—Rust Remover. Protective Coatings, Inc., Detroit, Mich.
 Visafume—Oil Burner Controls. Merco-Grid Corp., Chicago, Ill.
 Vise-Grip—Clamps. Petersen Mfg. Co., Inc., DeWitt, Neb.
 Visi-Draft—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.
 VitalRay—Space Heaters. Quad Stove Mfg. Co., Columbus, Ohio.
 Vitricel—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
 Vitro Flame—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Pk., N. J.
 Vitroliner—Prefabricated Chimneys, Chimney Linings, Vent and Flue Pipe and Fittings. Condensation Engineering Corp., Chicago, Ill.
 Volcano—Chimney Caps and Tops, Ventilators. Iwan Bros., Inc., South Bend, Ind.
 Volocitrol—Air Control Vanes. Barber-Colman Co., Rockford, Ill.
 Vortex—Oil Burners. Iron Fireman Mfg. Co., Cleveland, Ohio.

Vortex—Spray Nozzles. Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
 VR—Gas Burners. John Zink Co., Tulsa, Okla.
 Vulcan—Stokers. Canton Stoker Corp., Canton, Ohio.
 Vulcanite—Felt Roofing, Roofing Cement. Certain-teed Products Corp., Ardmore, Pa.
 Vulcatex—Caulking and Glazing Compounds. A. C. Horn Co., Inc., Long Island City, N. Y.
 Vulco—V-Belts and Pulleys. Gates Rubber Co., Denver, Colo.

W

W—Sheets, Wheeling Corrugating Co., Wheeling, W. Va.
 Wall Seal—Waterproofing. Evercrete Corp., New York, N. Y.
 Warco—Refractories. Walsh Refractories Corp., St. Louis, Mo.
 Warco—Presses and Press Brakes. The Federal Machine and Welders Co., Warren, Ohio.
 Ward Zephyr—Attic Fans. Edgar T. Ward Industries, Inc., Chicago, Ill.
 Warmahl—Furnaces. Mahl Mfg. Co., Huntington Park, Calif.
 Warmolator—Wall Furnaces, Heaters. Williams Radiator Co., Glendale, Calif.
 Warrior—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
 Watco—Spray Nozzles. Water Cooling Corp., New York, N. Y.
 Water-Boy—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
 Water Hot—Water Heaters. Security Mfg. Co., Kansas City, Mo.
 Water-RAY-trol—Oil-fired Water Heater. Ray Oil Burner Co., San Francisco, Calif.
 Waterbase—Furnaces. Farris Furnace Co., Springfield, Ill.
 Waterbury—Oil Burners, Ducts and Fittings, Pipe, Pipe Fittings and Accessories, Furnaces, Metal Connectors. Waterman-Waterbury Co., Minneapolis, Minn.
 Waterfoil—Waterproofing. A. C. Horn Co., Long Island City, N. Y.
 Waterloo Airfoil—Grilles, Louvers, Registers. Titus Manufacturing Corporation, Waterloo, Iowa.
 Watersal—Cement. Thompson & Co., Oakmont, Pa.
 Waterspar—Enamels and Lacquers. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
 Waterender—Humidifier Valves. Skuttle Mfg. Co., Detroit, Mich.
 WAW—Tools. W. A. Whitney Mfg. Co., Rockford, Ill.
 Wearweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, Ohio.
 Weather-Man—Weather Compensating Thermostats, Automatic Devices Co., Inc., Chicago, Ill.
 Weathercote—Roof Cement, Caulking Compounds, Paints, Waterproofing. Glidden Co., Cleveland, Ohio.
 Weathermaker—Air Conditioning Units. Carrier Corp., Syracuse, N. Y.
 Weathertwin—Windows. Chamberlin Co. of America, Detroit, Mich.
 Weatherwood—Insulation. United States Gypsum Co., Chicago, Ill.
 Webco—Portable Brakes. Webb Machine & Tool Co., Imperial, Pa.
 Webster—Air Washers. W. J. Strandwitz & Co., Inc., Camden, N. J.
 Wedgebelt—Belts and Pulleys. American Pulley Co., Philadelphia, Pa.
 Weir—Furnaces, Heaters, Stokers. Meyer Furnace Co., Peoria, Ill.

Weir-Meyer Heat—Air Conditioning Units, Burners, Furnaces. Meyer Furnace Co., Peoria, Ill.
 Weirlead—Sheets. Weirton Steel Co., Weirton, W. Va.
 Weircoloy—Copper Bearing Galvanized Sheets. Weirton Steel Co., Weirton, W. Va.
 Weirite—Tin Plate. Weirton Steel Co., Weirton, W. Va.
 Weirzin—Electrolytic Zinc Coated Sheets. Weirton Steel Co., Weirton, W. Va.
 Weisco—Skylight Lifts. H. Weiss & Co., New York, N. Y.
 Weld-o-trol—Spot Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
 Weldmaster—Brazing Torches. Modern Engineering Co., St. Louis, Mo.
 Wellsville Savage—Refractories. Chicago Fire Brick Co., Chicago, Ill.
 Wesco—Blower-Filter Units, Oil Burners, Chimney Caps, Furnaces. Northwest Foundry & Furnace Co., Portland, Ore.
 Western—Blowers, Furnaces. International Sales Co., San Francisco, Calif.
 Western—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.
 Western King—Furnaces. Independence Stove & Furnace Co., Independence, Mo.
 Westernaire—Ventilating Fans. Western Engineering & Mfg. Co., Los Angeles, Calif.
 Westmoreland—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Wetoil—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
 Whip Clamp—Clamping Device. Whipple Sheet Metal Works, Lansing, Mich.
 Whippet—Hoists. Ford Chain Block Div. American Chain & Cable Co., Inc., York, Pa.
 Whirlcone—Spray Nozzles. Water Cooling Equipment Corp., St. Louis, Mo.
 Whirljet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
 Whitney-Jensen—Sheet Metal Working Machinery and Tools. Whitney Metal Tool Co., Rockford, Ill.
 Wiechert—Furnaces, Heaters. St. Clair Foundry Corp., Centralia, Ill.
 Wilson—Arc Welders. Air Reduction Sales Co., New York, N. Y.
 Wilson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
 Wind Electric—Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
 Wind Motor—Roof Ventilators. Airecon Industries, Detroit, Mich.
 Wind-O-Cool—Fans. G. J. Belter Electric Mfg. Co., St. Louis, Mo.
 Windial—Anemometers. Friez Instrument Div. Bendix Aviation Corp., Baltimore, Md.
 Wind-O-Vent—Fans. Diehl Manufacturing Company, Somerville, N. J.
 Wind-O-Vent—Ventilator Units. Reed Unit-Fans, Inc., New Orleans, La.
 Wingfoil—Fans, Ventilators. L. J. Wing Mfg. Co., New York, N. Y.
 Winkler—Oil Burners, Heaters, Stokers. U. S. Machine Corporation, Lebanon, Ind.
 Winter-Chaser—Furnaces, Heaters. Campbell Heating Co., Des Moines, Iowa.
 Winter King—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Winterglo—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Winterway—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
 Wisconsin—Motors. Electric Motor Corp., Racine, Wis.
 Wizard—Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.
 W.O. No. 1—Rust Preventive Chemicals. Turco Products, Inc., Los Angeles, Calif.
 Wolfe—Angle Meter, Center Finders, Circle Meter, Divisor, Protractor. Interstate Sales Co., New York, N. Y.
 Wolverine—Furnaces. Marshall Furnace Co., Marshall, Mich.
 Wonderflux—Soldering Flux. Sherman & Co., New York, N. Y.
 Woolfelt—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.
 Wormfeed—Stokers. Canton Stoker Corp., Canton, Ohio.
 WR—Controls, White-Rodgers Electric Co., St. Louis, Mo.
 Wyandotte—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh, Pa.
 Wyco—Flexible Shaft Machines. Wyzenbeek & Staff, Inc., Chicago, Ill.
 Wycollex—Grinder. Wyzenbeek & Staff, Inc., Chicago, Ill.

X

XL—Metal Windows. Herrmann & Grace Co., Brooklyn, N. Y.
 X-L-All—Furnaces. Deshler Foundry & Machine Works, Deshler, Ohio.
 Xcel-Flux—Soldering Flux. American Products Corp., Chicago, Ill.
 Xit—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.
 X-Pandoseal—Transparent Waterproofing. X-Pando Corp., Long Island City, N. Y.
 XX—Punches. Parker-Kalon Corp., New York, N. Y.

Y

Yager's—Flux. Alex R. Benson Co., Inc., Hudson, N. Y.
 Yale—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.
 Yankee—Damper Clips and Tips. Howes-Woods Company, Cambridge, Mass.
 YarWay—Nozzles. Yarnall-Waring Co., Philadelphia, Pa.
 Yearound—Air Conditioning Units. Conditionaire Unit Co., Chicago, Ill.
 Yemco—Buffers, Grinders, Oil Burners, Water Heaters. York Electric & Machine Co., York, Pa.
 Yeloy—Plates. Youngstown Sheet & Tube Co., Youngstown, Ohio.
 York-Heat—Oil Burners, Furnaces, Heaters. York-Shipley, Inc., York, Pa.
 Yorkaire—Air Conditioning Units. York Corp., York, Pa.
 YouBert—Collectors and Blow Pipe Fittings. Young & Bertke Co., Cincinnati, Ohio.

Z

Z Seal—Bearings. Shafer Bearing Co., Downers Grove, Ill.

Zaponite—Sheet Metal Paint. Atlas Powder Co., North Chicago, Ill.
 Zeph-Air—Gas Furnace. XXth Century Heating & Ventilating Co., Akron, Ohio.
 Zephair—Fans. Hunter Fan & Ventilating Co., Inc., Memphis, Tenn.
 Zephyr—Furnaces. Premier Furnace Co., Dowagiac, Mich.
 Zephyr—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.
 Zephyr—Portable Electric Drills. Portable Electric Tools, Inc., Chicago, Ill.

Zephyr—Saws. DoAll Company, Minneapolis, Minn.
 Zero—Cement and Refractories. Standard Fuel Engineering Co., Detroit, Mich.
 Zerzone—Compressors. Copeland Refrigeration Corporation, Sidney, Ohio.
 Zilloy—Zinc Roofing and Sheets. New Jersey Zinc Co., New York, N. Y.
 Zinc-Alloy—Sheets. Inland Steel Co., Chicago, Ill.
 Zincgrip—Metal Sheets. Armco Steel Corp., Middletown, Ohio.

Zinodine—Corrosion-preventive and paint bonding chemical. American Chemical Paint Co., Ambler, Pa.
 Zip—Portable Spot Welders. Mid-States Welder Mfg. Co., Chicago, Ill.
 Zoneair—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
 Zono—Combustion Chambers. Robinson Insulation Co., Great Falls, Mont.
 Zonolite—Insulation. Robinson Insulation Co., Great Falls, Mont.

NATIONAL ASSOCIATIONS

identified with the warm air heating, residential air conducting, and sheet metal contracting industries.

- Aluminum Assn., Donald M. White, Secretary, 420 Lexington Avenue, New York 17, N.Y.
 American Gas Assn., H. Carl Wolf, Managing Director, 420 Lexington Avenue, New York 17, N.Y.
 American Iron and Steel Institute, Walter S. Tower, President, 350 Fifth Avenue, New York 1, N.Y.
 American Society of Heating and Ventilating Engineers, A. V. Hutchinson, Secretary, 51 Madison Avenue, New York 10, N.Y.
 American Zinc Institute, Inc., E. V. Gent, Executive Secretary, 60 East 42nd Street, New York, N.Y.
 Copper & Brass Research Assn., Bertram B. Caddle, Secretary, 420 Lexington Avenue, New York, N.Y.
 Gas Appliance Manufacturers' Assn., H. Leigh Whitelaw, Managing Director, 60 East 42nd Street, New York 17, N.Y.
 National Assn. of Fan Manufacturers, Inc., L. O. Monroe, Secretary-Treasurer, 2159 Guardian Building, Detroit 26, Mich.
 National Assn. of Sheet Metal Distributors, Thomas A. Fernley, Jr., Secretary-Treasurer, 305 Arch Street, Philadelphia, Pa.
 National Heating Wholesalers' Assn., Inc., E. L. Wyman, Executive Secretary, 609 Union Commerce Building, Cleveland 14, Ohio.
 National Warm Air Heating & Air Conditioning Assn., George Boeddens, Secretary-Treasurer and Managing Director, 145 Public Square, Cleveland 14, Ohio.
 National Warm Air Heating & Air Conditioning Assn., Canadian Chapter, C. B. Taylor, Secretary-Treasurer and Managing Director, Yonge at Deloraine, Toronto 12, Ontario, Canada.
 Oil-Heat Institute of America, Inc., Ralph H. L. Becker, Managing Director, 6 East 39th Street, New York 16, N.Y.
 Sheet Metal Contractors' National Assn., Inc., Joseph D. Wilder, Executive Secretary, 170 Division Street, Elgin, Ill.
 Stoker Manufacturers' Assn., Marc G. Bluth, Executive Secretary, 307 North Michigan Avenue, Chicago 1, Illinois.

Section of
American Artisan
1951 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL
AIR CONDITIONING AND SHEET METAL PRODUCTS

[Section 3—MANUFACTURERS' ADDRESSES]

A

- A & A Register Co., 8327 Clinton Rd., Cleveland 9, Ohio.
- A. C. Co., 5140 Crenshaw Blvd., Los Angeles 43, Calif.
- A-C Devices Co., 4301 N. Harlem Ave., Chicago 33, Ill.
- A-J Mfg. Co., 2119 Washington St., Kansas City 8, Mo.
- A-P Controls Corp., 2450 N. 32nd St., Milwaukee 45, Wis.
- Abbott Mfg. Co., 332 E. Main St., Painesville, Ohio.
- Accurate Sheet Metal & Mfg. Works, 2336-40 Milwaukee Av., Chicago 47, Ill.
- Ace Engineering Co., 1435 W. 15th St., Chicago 8, Ill.
- Acer & Whedon, Inc., Commercial St., Medina, N. Y.
- Acet-A-Tips Co., 5069 W. Madison St., Chicago 44, Ill.
- Ackermann Mfg. Co., Wheeling, W. Va.
- Acme Asbestos Covering & Flooring Co., 222 Elizabeth St., Chicago 7, Ill.
- Acme Electric Heating Co., Inc., 1205 Washington St., Boston 18, Mass.
- Acme Electric Welder Co., 2618 Fruitland Ave., Los Angeles 58, Calif.
- Acme Equipment Co., Inc., 126 S. Clinton St., Chicago 6, Ill.
- Acme Equipment Co., Muskogee, Okla.
- Acme Furnace Fitting Co., 844 W. 39th St., Chicago 21, Ill.
- Acme Heat & Power Inc., 318 Ten Eyck St., Brooklyn 6, N. Y.
- Acme Industries, Inc., Mechanic & Ganson Sts., Jackson, Mich.
- Acme Mfg. Co., 7930 State Rd., Philadelphia 36, Pa.
- Acme Oil Burner Co., Inc., 210 Third Av. S. W., Cedar Rapids, Iowa.
- Acme Saw Works & Supply Co., 6213 Avalon Blvd., Los Angeles 3, Calif.
- Acme Wire & Iron Works, Canfield & Moran, Detroit 7, Mich.
- Acro Welder Mfg. Co., 1825 W. St. Paul Ave., Milwaukee 3, Wis.
- Adams Bros. Mfg. Co., Inc., 1500 W. North Av., Pittsburgh 33, Pa.
- Adams Co., The, Bridge St., Dubuque, Iowa.
- Adams Mfg. Co., 1364 E. 47th St., Cleveland 3, Ohio.
- Adelta Mfg. Co., 21st & Ellsworth Sts., Philadelphia 46, Pa.
- Advance Aluminum Castings Corp., 2742 W. 36th Pl., Chicago 32, Ill.
- Advance Furnace Co., 2300 E. Douglas, Wichita 7, Kans.
- Aeolus Dickinson, 3320 S. Artesian Av., Chicago 8, Ill.
- Aerofin Corp., 410 S. Geddes St., Syracuse 1, N. Y.
- Aeroil Products Co., Inc., Wesley St., South Hackensack, N. J.
- Aeroquip Corp., 300 S. East Ave., Jackson, Mich.
- Aerotec Corp., Greenwich, Conn.
- Aerovent Fan Co., Inc., 710 E. Ash St., Piqua, Ohio.
- Agat-Detroit Co., 602 First National Bank Bldg., Ann Arbor, Mich.
- Agnew Electric Co., 127 S. Main St., Milford, Mich.
- Agricola Furnace Co., Inc., North 12th St., Gadsden, Ala.
- Ahlberg Bearing Co., 3012 W. 47th St., Chicago 32, Ill.
- Air Conditioning Equipment Co., 301 N. 7th St., Minneapolis 5, Minn.
- Air Conditioning Products Co., 2340 W. Lafayette Blvd., Detroit 16, Mich.
- Air Controls, Inc., 2310 E. Superior Av., Cleveland 14, Ohio.
- Air Control Products, Inc., Coopersville, Mich.
- Air Cooling Engineering Co., Morton Grove, Ill.
- Air Devices, Inc., 17 E. 42nd St., New York 17, N. Y.
- Air-Eau Heat, Inc., 1002 S.E. 53rd Ave., Portland 12, Ore.
- Air Equipment Co., Inc., 1713 W. Carroll Ave., Chicago 12, Ill.
- Airecon Industries, 2536 Fourteenth St., Detroit 16, Mich.
- Aire Flow Furnace Pipe Co., 1044 Buhl Bldg., Detroit, Mich.
- Airfan Engineering Co., 7401 Anaheim-Telegraph Rd., Los Angeles 22, Calif.
- Air Filter Corp., 108 N. Water St., Milwaukee 2, Wis.
- Airflame, Inc., 648 McAlister Av., Waukegan, Ill.
- Airgard Mfg. Co., 362 W. Erie St., Chicago 10, Ill.
- Airjet Ventilator Co., 380 Plumose Dr., Pasadena 10, Calif.
- Airkem, Inc., 241 E. 44th St., New York 17, N. Y.
- Airmaster Corp., 4317 Ravenswood Av., Chicago 13, Ill.
- Air-Maze Corp., 3200 Harvard Av., Cleveland 5, Ohio.
- Air Reduction Sales Co., 60 E. 42nd St., New York 17, N. Y.
- Air & Refrigeration Corp., 475 Fifth Av., New York 17, N. Y.
- Air-Speed Tool Co., 1500 W. Slauson Av., Los Angeles 47, Calif.
- Air Stream Filter Corp., 2100 Washington Av., St. Louis 3, Mo.
- Airtemp Div., Chrysler Corp., 1600 Webster St., Dayton 1, Ohio.
- Airtherm Mfg. Co., 706 S. Spring Ave., St. Louis 10, Mo.
- Airwasher Corp., Eaton Rapids, Mich.
- Ajax Building Bracket Co., 1551 Rydal-Mount Rd., Cleveland Heights 18, Ohio.
- Ajax Furnace Fitting Co., Div., Cincinnati Sheet Metal & Roofing Co., 216 E. Front St., Cincinnati 2, Ohio.
- Ajax Thermostatic Controls Co., County Line Rd., Gates Mills, Ohio.
- Alabama Metal Lath Co., P. O. Box 992, Birmingham, Ala.
- Aladdin Heating Corp., 2222 San Pablo Av., Oakland 12, Calif.
- Albertson & Co., Inc., Sioux City 3, Iowa.
- Alco Valve Co., 865 Kingsland Av., St. Louis 5, Mo.
- Alcon Engineering Co., 902 19th St., San Diego 2, Calif.
- Alden Mfg. Co., W. Walnut St., Painesville, Ohio.
- Aldrich Co., Wyoming, Ill.
- Alfoll Div., Reflectal Corp., 155 E. 44th St., New York 17, N. Y.
- All Metal Screw Products Co., Inc., 33 Green St., New York, N. Y.
- All-State Welding Alloys Co., Inc., 273 Ferris St., White Plains, N. Y.
- Allan Corp., 623 Prospect St., Trenton 8, N. J.
- Allan Engineering Co., Walter, Box 1211, Midway Rd., Dallas, Texas.
- Allegheny Ludlum Steel Corp., 2020 Oliver Bldg., Pittsburgh 22, Pa.
- Allen, H. D., 3201 Casitas Ave., Los Angeles 26, Calif.
- Allen-Bradley Co., 1335 S. First St., Milwaukee 4, Wis.
- Allen Co., Inc., L. B. 6719 Bryn Mawr Ave., Chicago 31, Ill.
- Allen Mfg. Co., Inc., Nashville 1, Tenn.
- Allen Stoker Co., 235 S. Penn St., Allentown, Pa.
- Allen Ventilator Div., Production Planning Co., 704 Woodward, Rochester, Mich.
- All-Gas Equipment Co., 3235 N. 31st St., Milwaukee 10, Wis.
- Allied Building Credits, Inc., Dept. A. 3109 Wilshire Blvd., Los Angeles 5, Calif.
- Allied Heating & Air Conditioning Co., 14807 Condon Av., Lawndale, Calif.
- Allis-Chalmers Mfg. Co., P. O. Box 512, Milwaukee 1, Wis.
- Allis Co., Louis, 427 Stewart St., Milwaukee 7, Wis.
- Allmetal Weatherstrip Co., 2241 N. Knox Av., Chicago 39, Ill.
- Alpha Metals, Inc., 363 Hudson Av., Brooklyn 1, N. Y.
- Alphil Spot Welding Co., 1058 Pacific St., Brooklyn 1, N. Y.
- Alton Mfg. Co., 1112 Ross Av., Dallas 2, Texas.
- Alton Mineral Wool Insulation Co., 2317 Whittemore Pl., St. Louis 4, Mo.
- Aluminum Co. of America, 801 Gulf Bldg., Pittsburgh 19, Pa.
- Aluminum Goods Mfg. Co., Manitowoc, Wis.
- Amerform Corp., Real Estate Trust Building, Philadelphia 7, Pa.
- American Agile Corp., 5806 Hough Av., Cleveland 3, Ohio.
- American Air Filter Co., Inc., 355 Central Av., Louisville 8, Ky.
- American Blower Corp., Detroit 32, Mich.
- American Brass Co., 414 Meadow St., Waterbury 20, Conn.
- American Cabinet Hardware Corp., Rockford, Ill.
- American Chain Div., American Chain & Cable Co., Inc., York, Pa.
- American Chemical Paint Co., Brookside Av., Ambler, Pa.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- American Coal Burner Co., 18 E. Erie St., Chicago 11, Ill.
 American Coils, Inc., 360 Thomas St., Newark 3, N. J.
 American Control Co., Box 629, Compton, Calif.
 American Coalair Corp., 3604 Mayflower St., P. O. Box 2300, Jacksonville 3, Fla.
 American Cooling Tower Co., 2710 McGee St., Kansas City, Mo.
 American District Steam Co., Inc., P. O. Box 548, North Tonawanda, N. Y.
 American Engineering Co., 2446 Aramingo Av., Philadelphia 25, Pa.
 American Flange & Mfg. Co., Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 American Fluorid Co., 4011 Red Bank Rd., Cincinnati 27, Ohio.
 American Foundry & Furnace Co., Washington at McClun St., Bloomington, Ill.
 • American Furnace Co., 1300 Hampton Av., St. Louis 10, Mo.
 American Furnace & Foundry Co., Box 198, Milan, Mich.
 American Gas Burner, Inc., 418 S. Pennsylvania St., Indianapolis 4, Ind.
 American Gas Heater Corp., 1650 W. 79th St., Chicago 20, Ill.
 American Gas Machine Co., 305 Front St., Albert Lea, Minn.
 American Hair & Felt Co., 222 N. Bank Dr., Chicago 34, Ill.
 American Instrument Co., Inc., 8010 Georgia Av., Silver Spring, Md.
 American Insulator Corp., New Freedom, Pa.
 American-Larson Ventilating Co., 1004 Keystone Bldg., Pittsburgh 22, Pa.
 • American Machine Products Co., 401 S. Third Av., Marshalltown, Iowa.
 American-Marietta Co., 43 E. Ohio St., Chicago 11, Ill.
 American Metal Hose Branch, American Brass Co., 698 S. Main St., Waterbury 20, Conn.
 American Metal Products Co., Box 7037, Sylvania Sta., Fort Worth 9, Texas.
 American Mohawk Co., Inc., 580 Hudson St., New York 14, N. Y.
 American MonoRail Co., 13133 Athens Ave., Cleveland 7, Ohio.
 American Nickeloid Co., 1505 Second St., Peru, Ill.
 American Products Corp., 422 S. Dearborn St., Chicago 5, Ill.
 American Pulley Co., 4200 Wissahickon Av., Philadelphia 29, Pa.
 • American Radiator & Standard Sanitary Corp., P. O. Box 1226, Pittsburgh 30, Pa.
 American Screw Co., Willimantic, Conn.
 American Solder & Flux Co., 2152 East Norris St., Philadelphia 25, Pa.
 American Steel Band Co., Box 565, Pittsburgh 30, Pa.
 American Steel & Wire Co., Sub. U. S. Steel Corp., Rockefeller Bldg., Cleveland, Ohio.
 American Stove Co., Lorain Div., 1641 S. Kingshighway Blvd., St. Louis 10, Mo.
 American Ventilating Hose Co., 15 Park Row, New York 7, N. Y.
 American Warming & Ventilating Co., 1017 Summit St., Toledo 4, Ohio.
 Ammerman Co., C. L., 3719 3rd. St., N.E., Minneapolis 21, Minn.
 Ampion Corp., 4-88 Forty-Seventh Av., Long Island City 1, N. Y.
 Anchor Burner Co., P. O. Box 4, 420 E. Grand Av., Oklahoma City, Okla.
 • Anchor Div. Stratton & Terstegge Co., P. O. Box 311, New Albany, Ind.
 Anderson Oil Heating Co., 1300 E. Pike St., Seattle 22, Wash.
 Andrews Heater Co., 1750 W. Jefferson Blvd., Los Angeles 18, Calif.
 Andrews Heating Co., 117-199 Main St., S. E., Minneapolis 14, Minn.
 • Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.
 Angier Corp., Framingham, Mass.
 Andrews-Schroeder Heating Co., Inc., 120 W. Chevy Chase, Glendale 4, Calif.
 • Anthracite Institute, 101 Park Ave., New York 17, N. Y.
 Anti-Friction Bearings Co., 2020 S. Figueroa St., Los Angeles 7, Calif.
 Apollo Metal Works, 66th Pl. & S. Oak Park Av., Clearing Sta., Chicago 38, Ill.
 Apollo Steel Co., 609-617 Warren Av., Apollo, Pa.
 Appleton Supply Co., Inc., P. O. Box 319, Appleton, Wis.
 Applied Mechanics Co., 167 Oliver St., Boston 10, Mass.
 April Showers Co., Inc., 4126 Eighth St., N. W., Washington 11, D. C.
 Aqua-Mist Co., 426 Jefferson St., Topeka, Kans.
 Arabol Mfg. Co., 110 E. 42nd St., New York 17, N. Y.
 Arcos Corp., 1500 S. 30th St., Philadelphia 43, Pa.
 Arcweld Mfg. Co., Inc., 3469 Third Av., W., Seattle 99, Wash.
 Arcx Co., 4317 Ravenswood Av., Chicago 13, Ill.
 Arlington Electric Co., 5550 Easton Av., St. Louis 12, Mo.
 Armo Steel Corp., 703 Curtis St., Middletown, Ohio.
 • Armstrong Co., 241 S. Post St., Detroit 17, Mich.
 Armstrong Cork Co., Lancaster, Pa.
 • Armstrong Furnace Co., 851 W. Third Ave., Columbus 8, Ohio; 1701 E. Euclid Av., Des Moines 4, Iowa.
 Armstrong Products Corp., Box 940, Huntington 12, W. Va.
 Arrow-Hart & Hegeman Electric Co., 105 Hawthorne St., Hartford 6, Conn.
 Aston Products, Inc., 19254 John R., Detroit 3, Mich.
 Associated Heating Supplies, Inc., 2837 S. LaSalle St., Chicago 16, Ill.
 Associates Engineering Co., 110 Elmwood Ave., Buffalo 1, N. Y.
 Atcheson Glass Co., T. J., 920 Main St., Buffalo 2, N. Y.
 Atcheson Specialty Mfg. Co., 1620 Pacific Av., Atchison, Kans.
 Atkins & Co., E. C. 402 S. Illinois St., Indianapolis 9, Ind.
 • Atlas Mfg. Co., Eustis and Robbins, St. Paul, Minn.
 Atlas Powder Co., North Chicago, Ill.
 Atlas Utilities Co., Inc., 17 Exchange St., Providence 3, R. I.
 Atlas Valve Co., 282 South St., Newark 3, N. J.
 Auburn Burner Co., Lock Box 269, Auburn, Ind.
 Auburn Foundry, Inc., Stoker Div., Lock Box 471, Auburn, Ind.
 • Auer Register Co., 6600 Clement Ave., Cleveland 3, Ohio.
 Au-Temp-Co Corp., 521 Fifth Av., New York 17, N. Y.
 Autoforce Ventilating System, 244 Washington St., Boston 8, Mass.
 Autogas Co., 2155 Fullerton Ave., Chicago 47, Ill.
 Auto-Heat, Newfield St., Middletown, Conn.
 • Automatic Burner Corp., 1823 Carroll Av., Chicago 12, Ill.
 Automatic Devices Co., Inc., Weather Controls Div., 53 W. Jackson Blvd., Chicago 4, Ill.
 Automatic Electric Mfg. Co., 10 State St., Mankato, Minn.
 Automatic Firing Corp., 4417 Oletha Ave., St. Louis 16, Mo.
 Automatic Furnace Co., 1111 Race St., Lansing 5, Mich.
 Automatic Gas Equipment Co., 301 Brushton Av., Pittsburgh 21, Pa.
 • Automatic Humidifier Co., 19th & Main Sts., Cedar Falls, Iowa.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Av., Philadelphia 44, Pa.
 Avery Farm Machinery Co., 2006 S. Washington St., Peoria 2, Ill.

B

- B & C Metal Stamping Co., 590-592 Means St., N.W., Atlanta 3, Ga.
 B & K Tank Gauge Corp., 556 Summer St., Paterson 3, N. J.
 B. G. B. Mfg. Co., 5021 Wyoming, Dearborn, Mich.
 B/W Controller Corp., 2200 E. Maple Av., Birmingham, Mich.
 Babbitt, Inc., 258 Canal St., New York 13, N. Y.
 Babbitt Chemical Specialties Co., 630 Fifth Ave., New York 20, N. Y.
 Babcock & Wilcox Co., 85 Liberty St., New York 6, N. Y.
 • Bacharach Industrial Instrument Co., 7000 Bennett St., Pittsburgh 8, Pa.
 Bache & Co., Semon, Greenwich & Morton Sts., New York 14, N. Y.
 Baer Bros., 438 W. 37th St., New York 18, N. Y.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Baker Furnace & Cleaner Mfg. Co., 2810 Midwood Av., Toledo 6, Ohio.
 Baker Ice Machine Co., Inc., South Windham, Maine.
 Baldor Electric Co., 4358 Duncan Av., St. Louis 10, Mo.
 Baldwin-Hill Co., 597 Breunig Ave., Trenton 2, N. J.
 Balloffet Dies & Nozzle Co., Inc., 6825 Adams St., Guttenberg, N. J.
 Ballonoff Metal Products Co., 1820 E. 37th St., Cleveland 14, Ohio.
 Baltimore Porcelain Steel Corp., P. O. Box 928 AA, Baltimore 3, Md.
 Banner Burner Co., Indianapolis Ave., Youngstown 7, Ohio.
 Banner Products Co., 4934 N. 29th St., Milwaukee 9, Wis.
 Banner Repair Parts Co., 103 E. Indiana Av., Youngstown 7, Ohio.
 Barber-Colman Co., 1226 Rock St., Rockford, Ill.
 • Barber Gas Burner Co., 3704 Superior Av., Cleveland 14, Ohio.
 Bar-Brook Mfg. Co., Inc., 6135 Linwood Av., Shreveport, La.
 Barcofer Mfg. Co., Salina, Kans.
 Bard Mfg. Co., Evansport Road, Bryan, Ohio.
 Barnard Co., Geo. A., 74 Prescott St., Worcester, Mass.
 Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.
 Barnes Co., Inc., W. O., 1297 Terminal Av., Detroit 14, Mich.
 Barnhardt Mfg. Co., P. O. Box 2176, Charlotte 1, N. C.
 Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
 • Barth Mfg. Co., Milldale, Conn.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Bartlett Mfg. Co., 3003 E. Grand Blvd., Detroit 2, Mich.
 Barton Co., 719 Hennepin, Minneapolis 2, Minn.
 Barwick Mfg. Corp., 317 E. 18th, Wichita 3, Kans.
 Bastian-Blessing Co., 4201 W. Petersen Ave., Chicago 30, Ill.
 Bastian Mfg. Co., W. B., 2117 Violet St., Los Angeles 21, Calif.
 Bastian-Morley Co., Inc., 208 Truesdale Ave., La Porte, Ind.
 Bath Co., Cyril E., 70th & Machinery Ave., Cleveland 3, Ohio.
 Bauer & Black Div., The Kendall Co., 2500 S. Dearborn St., Chicago 16, Ill.
 • Bayley Blower Co., 1817 S. 66th St., Milwaukee 14, Wis.
 Bayonne Steel Products Co., Clinton & Jelliff Aves., Newark 8, N. J.
 Beacon-Morris Corp., 60 Brainerd Rd., Allston, Boston 34, Mass.
 Bead Chain Mfg. Co., 105 Mountain Grove St., Bridgeport 3, Conn.
 Beall Pipe & Tank Corp., 1945 N. Columbia Dr., Portland 3, Ore.
 Bearle Products Co., 1255 S. Monroe Ave., Green Bay, Wis.
 Bear Mfg. Co., Industrial Div., 2030 Fifth Ave., Rock Island, Ill.
 Beatty Machine & Mfg. Co., 932 150th St., Hammond, Ind.
 Beaver Mfg. Co., 2801 S. E. Milwaukee, Portland, Ore.
 Beck Engineering Combustion Company, 2100 Cole St., St. Louis 6, Mo.
 Beckett & Co., Thomas, 2001 Willowbrook Rd., P. O. 7354, Dallas 9, Texas.
 Beckett Corp., R. W., W. River St., Elyria, Ohio.
 Beckley Perforating Co., 305 North Av., Garwood, N. J.
 Belden Machine Co., 1108 Whalley Ave., New Haven 15, Conn.
 Bell & Gossett Co., 8200 N. Austin Av., Morton Grove, Ill.
 Belmont Smelting & Refining Works, Inc., 330 Belmont Av., Brooklyn 7, N. Y.
 Belter Electric Mfg. Co., G. J., 3830 Olive St., St. Louis 8, Mo.
 Benjamin Air Rifle Co., 1527 S. 8th St., St. Louis 4, Mo.
 Benjamin Electric Mfg. Co., Des Plaines, Ill.
 Benson Co., Inc., Alex R., 1040 S. Bay Rd., Hudson, N. Y.
 • Berger Bros. Co., 229-237 Arch St., Philadelphia 6, Pa.
 Berger Furnace Mfg. Co., 5924 Center Ave., Pittsburgh 6, Pa.
 Berger Mfg. Div. of Republic Steel Corp., 1038 Bleden Ave., N. E., Canton 5, Ohio.
 Bergstrom Mfg. Corp., Neenah, Wis.
 Berkroy Products, Inc., 2516 N. Ontario St., Burbank, Calif.
 Bern's Mfg. Co., 2278 Elston Av., Chicago 14, Ill.
 Bernz Co., Otto, 280 Lyell Ave., Rochester 6, N. Y.
 Berridge Shear Co., Jefferson & St. Joseph Sts., Sturgis, Mich.
 Bertsch & Co., Church St., Cambridge City, Ind.
 • Besco Corp., P. O. Box 1163, Cincinnati 1, Ohio.
 Best Register Co., 2005 W. Oklahoma Av., Milwaukee 15, Wis.
 Bethlehem Foundry & Machine Co., 225 W. Second St., Bethlehem, Pa.
 • Bethlehem Steel Co., 701 E. Third St., Bethlehem, Pa.
 Betz Corp., 445 State St., Hammond, Ind.
 • Beverly Shear Mfg. Co., The, 3004 W. 11th St., Chicago 43, Ill.
 Beyer Oil Burner Co., Rosamond, Calif.
 Bieler & Son, L., 35-42 41st St., Long Island City, N. Y.
 Biersach & Niedermeyer Co., 1937 N. Hubbard St., Milwaukee 12, Wis.
 Biggs Supply Co., B. C., Lincoln, Nebr.
 Binks Mfg. Co., 3114 Carroll Av., Chicago 12, Ill.
 Bird Archer Co., 4337 N. America St., Philadelphia, Pa.
 Bird & Son, Inc., East Walpole, Mass.
 • Bishop & Babcock Mfg. Co., 4901 Hamilton Av., Cleveland 14, Ohio.
 Bishop Co., R. H., 103 N. Second St., Champaign, Ill.
 Black & Decker Mfg. Co., Towson 4, Md.
 Black Diamond Stoker Co., E. 4th & Plymouth, Sioux City, Iowa.
 Black Mfg. Co., 1426 W. Baltimore St., Baltimore 23, Md.
 Black, Sivalls & Bryson, Inc., 106 W. 14th St., Kansas City 6, Mo.
 Bliss Co., E. W., 1375 Roff Rd., Canton, Ohio.
 Blower Application Co., 3165 N. 30th St., Milwaukee 10, Wis.
 Blue Ridge Talc Co., Inc., Henry, Va.
 Bock Corp., 110 S. Dickinson St., Madison 3, Wis.
 Bodine Electric Co., 2254 W. Ohio St., Chicago 12, Ill.
 Bogue Electric Co., 37 Kentucky Av., Paterson 3, N. J.
 Bohn Aluminum & Brass, Michigan Ave. & Shelby St., Detroit, Mich.
 • Bonas Mfg. Co., 209 State St., Binghamton, N. Y.
 Bone Tool & Gauge Co., 380 24th St., Detroit 16, Mich.
 Borm Mfg. Co., 23 N. Union St., Elgin, Ill.
 Bossert Co., Div. The Timken-Detroit Axle Co., 1002 Oswego St., Utica 1, N. Y.
 • Boston Machine Works Co., 7 Willow St., Lynn, Mass.
 Botfield Refractories Co., Swanson & Clymer Sts., Philadelphia 47, Pa.
 Bowee Furnace Works, 180 W. Eighth St., Waterloo, Iowa.
 Bowley Air Devices Co., 300 W. Indianapolis, Wichita, Kans.
 Bowser, Inc., Incineration Div., Cairo, Ill.
 Braden Mfg. Co., 431 N. 14th St., Terre Haute, Ind.
 Brandes Co., 2046 Winnebago St., Madison 4, Wis.
 Brasco Mfg. Co., 152nd & Commercial Av., Harvey, Ill.
 • Brauer Supply Co., A. G., 2100 Washington Ave., St. Louis 3, Mo.
 Breese Burners, Inc., P. O. Box 1458, Santa Fe, N. Mex.
 Breeze Corps, Inc., 43 S. 6th St., Newark 7, N. J.
 Breidert, G. C., Co., 3129 San Fernando Rd., Los Angeles 65, Calif.
 Bremil Mfg. Co., Box 1030, Erie, Pa.
 Brenner & Co., Inc., Jacob 45 Third St., Fond du Lac, Wis.
 Beuer Electric Mfg. Co., 5100 N. Ravenswood Ave., Chicago 40, Ill.
 Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.
 Bridgeport Chain & Mfg. Co., 964 Crescent Ave., Bridgeport 1, Conn.
 Bristol Co., P.O. Box 1790, Waterbury 20, Conn.
 Bristol Metal Working Equipment, 534 Front St., Hartford, Conn.
 Broan Mfg. Co., Inc., 1669 N. Water St., Milwaukee 2, Wis.
 Brooks Co., Inc., B. D., 361 Atlantic Ave., Boston 10, Mass.
 Bros Boiler & Mfg. Co., Wm., 1057 Tenth Ave., S. E., Minneapolis 14, Minn.
 • Brown-Appton Co., 681 Fifth Ave., New York, N. Y.
 Brown-Brockmeyer Co., Inc., 1098 Smithville Rd., Dayton 1, Ohio.
 Brown-Hart Engineering Corp., 1200 E. Nine Mile Rd., Hazel Park, Mich.
 Brown Instrument Co., Div. Minneapolis-Honeywell Regulator Co., 4443 Wayne Ave., Philadelphia 44, Pa.
 Brown Steel Tank Co., 2901 S. E. Fourth St., Minneapolis 14, Minn.
 Brownell Co., 404 N. Findlay St., Dayton 1, Ohio.
 Browning Mfg. Co., Inc., Central Ave., Main & Chester Sts., Maysville, Ky.
 Brumme Mfg. Co., 1240 E. Empire St., R. R. 1, Bloomington, Ill.
 • Brundage Co., 500 N. Park St., Kalamazoo 11, Mich.
 Brunner Mfg. Co., 1821 Broad St., Utica 1, N. Y.
 Bruno Tools, 9330 Santa Monica Blvd., Beverly Hills, Calif.
 Brushes & Brooms Co., 75 Warren St., New York, N. Y.
 Bryan Steam Corp., P. O. Box 337, Peru, Ind.
 Bryant Corp., C. L., 4610 St. Clair Av., Cleveland 3, Ohio.
 • Bryant Heater Div., Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, Ohio.
 Buckeye Tools Corp., 29 W. Apple St., Dayton 1, Ohio.
 Buckeye Water Heater Co., 6901 Quincy Ave., Cleveland 4, Ohio.
 Budco Inc., 13415 Gratiot Av., Detroit 5, Mich.
 Buffalo Forge Co., 497 Broadway, Buffalo, N. Y.
 Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14, Mich.
 Burcott Mills, 618 W. Fulton St., Chicago, Ill.
 Alan E. Burden Co., 6525 Sunset Blvd., Hollywood 28, Calif.
 Burdett Mfg. Co., 3433 W. Madison St., Chicago, Ill.
 Burgess-Norton Mfg. Co., 773 Peyton St., Geneva, Ill.
 • Burgess Thomas Co., Box 287, Bloomfield, N. J.
 • Burke Engineering Co., 2505 E. 24th St., Los Angeles 38, Calif.
 Burnham Corp., Boiler Div., 2 Main St., Irvington-on-the-Hudson, N. Y.
 Burnley Battery & Mfg. Co., Clay St., North East, Pa.
 Burns Machinery Co., F. W., 1730 W. North Av., Milwaukee 5, Wis.
 Burt Mfg. Co., 38 E. South St., Akron 11, Ohio.
 Bush Mfg. Co., 179 South St., West Hartford 10, Conn.
 Byers Co., A. M., Clark Bldg., Pittsburgh 22, Pa.

C

- C. & H. Air Conditioning Fan Co., Inc., 1603 DeKalb Ave., N. E., Atlanta 6, Ga.
 Cabot, Inc., Samuel, 141 Milk St., Boston 9, Mass.
 Cady Co., Sub. General Fittings Co., 123 Georgia Av., Providence 5, R. I.
 Calbar Paint & Varnish Co., 2612 N. Martha St., Philadelphia 25, Pa.
 Calculator Div., Valley Welding & Boiler Co., Bay City, Mich.
 • Calculator Specialty Co., 122 S. Michigan Ave., Chicago 3, Ill.
 Calimode, Inc., 12 Third St., N.E., Atlanta, Ga.
 Callahan Can Machine Co., Inc., 80 Richards St., Brooklyn, N. Y.
 Caloroli Burner Corp., 1477 Park St., Hartford 6, Conn.
 Camloc Fastener Corp., 420 Lexington Ave., New York 17, N. Y.
 Campbell Engineering Co., 918 N. Union St., Appleton, Wis.
 Campbell Equipment Co., 6643 Ridge Ave., Chicago 26, Ill.
 Campbell Heating Co., E. K., 1809 Manchester Ave., Kansas City 3, Mo.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Campbell Heating Co., P. O. Box 833, Des Moines 4, Iowa.
Campbell Machine Div., American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn.
Campbell Stainless Products Co., Washington, Pa.
Cam-StAT Inc., Div. Paul Henry Co., 2310 S. La Cienega Blvd., Los Angeles 34, Calif.
Canatney Electric Mfg. Co., P. O. Box 356, Kansas City 8, Mo.
Cannellton Sewer Pipe Co., Radiantite Div., Fourth & Washington Sts., Cannelton, Ind.
Canton Stoker Corp., 307 Andrews Pl., S. W., Canton 1, Ohio.
Carajon Chemical Co., Inc., 428 W. Main St., Fremont, Mich.
Carolina Blower Co., Inc., 430 Morehead Ave., Greensboro, N. C.
Carbide & Carbon Chemicals Div., Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Carboloy Co., Inc., 11177 E. Eight Mile Rd., Detroit 32, Mich.
Carey Mfg. Co., Philip, Cincinnati 15, Ohio.
Carolina Aniline & Extract Co., Inc., P. O. 2386, Charlotte, N. C.
Carpenter Heating & Stoker Co., 2135 St. Clair Ave., Cleveland 14, Ohio.
Carrier Corp., 302 S. Geddes St., Syracuse 1, N. Y.
Carter Paint Co., 310 N. Main St., Liberty, Ind.
Cartier & Sons Co., M. N., 275 Canal St., Providence 3, R. I.
Cary Mfg. Co., Waupaca, Wis.
Castle Industries Co., Inc., Old Nepperhan Av., Yonkers 3, N. Y.
Catskill Metal Works, Inc., Catskill, N. Y.
Celco Corp., 110 E. 42nd St., New York 17, N. Y.
Celotex Corp., 120 S. LaSalle St., Chicago 3, Ill.
Central Furnace & Stove Repair Co., 3937 Olive St., St. Louis 8, Mo.
Central Rubber & Steel Corp., Findlay, Ohio.
Central States Mfg. Co., Inc., 1200 S. Summit, Arkansas City, Kans.
Central Steel & Wire Co., P. O. Box 5310-A, Chicago 80, Ill.
• Central-West Machinery Co., 335 S. Western Av., Chicago 12, Ill.
Centri-Spray Co., 14290 Meyers Rd., Detroit 27, Mich.
• Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
• Century Engineering Corp., 401-431 Third St., S. E., Cedar Rapids, Iowa.
Century Fan & Ventilator Co., 43 Cedar St., Stamford, Conn.
Ceramic Products Mfg. Co., 139 E. Garfield Av., Milwaukee 12, Wis.
Certain-teed Products Corp., 120 Lancaster Ave., Ardmore, Pa.
Certified Furnace Co., Div. Stainless & Steel Products Co., 1000 Berry Av., St. Paul 4, Minn.
Chain Belt Co., 1618 W. Bruce St., Milwaukee 4, Wis.
Chalmers Oil Burner Co., 318 First Av., N., Minneapolis 1, Minn.
Chamberlin Co. of America, 1254 Labrosse, Detroit 26, Mich.
Champion Blower & Forge Co., Harrisburg Av., & Charlotte St., Lancaster, Pa.
Champion Bronze Powder & Paint Co., 2522 W. Van Buren St., Chicago, Ill.
• Champion Furnace Pipe Co., 211-215 Eaton St., Peoria 3, Ill.
Champion Products Co., 1197 Terrace St., Muskegon, Mich.
• Champion Tool Co., 4261 S. Broadway, Los Angeles 37, Calif.
Chandler Co., 804 1st Av., N. W., Cedar Rapids, Iowa.
• Char-Gale Mfg. Co., 4325 Hiawatha Av., Minneapolis 6, Minn.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Chattanooga Implement & Mfg. Co., First and Delmar Sts., Chattanooga 6, Tenn.
Cheesman-Elliott Co., Inc., 639 Kent Av., Brooklyn 11, N. Y.
Chelsea Fan & Blower Co., Inc., 639 South Ave., Plainfield, N. J.
Cheney Flashing Co., 623 Prospect St., Trenton 3, N. J.
Cherry Rivet Co., 231 Winston St., Los Angeles 13, Calif.
• Chevrolet Motor Div., General Motors Corp., Detroit 2, Mich.
Chicago Automatic Stoker Co., Inc., 14 N. Clinton St., Chicago 6, Ill.
Chicago Belting Co., 113 N. Green St., Chicago 7, Ill.
Chicago Blower Corp., 4558 W. Congress St., Chicago 24, Ill.
Chicago Die Casting Co., 2510-14 W. Monroe St., Chicago 12, Ill.
Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.
Chicago Fan & Finn Coil Co., 1937 Walnut St., Chicago 12, Ill.
Chicago Fire Brick Co., 1467 N. Elston Av., Chicago 22, Ill.
Chicago Furnace Supply Co., 1278 Clybourn Av., Chicago 10, Ill.
Chicago Heights Furnace Supply Co., 102 E. 22nd St., Chicago Heights, Ill.
Chicago Metal Hose Corp., 1515 S. Third Av., Maywood, Ill.
Chicago Metal Mfg. Co., 3724 S. Rockwell St., Chicago 32, Ill.
Chicago Perforating Co., 2445 W. 24th Pl., Chicago 8, Ill.
Chicago Pneumatic Tool Co., 6 E. 44th St., New York 17, N. Y.
- Chicago Precision Machine Co., 920 So. Michigan Av., Chicago 5, Ill.
Chicago Rawhide Mfg. Co., 1312 Elston Av., Chicago, Ill.
Chicago Rivet & Machine Co., 9600 W. Jackson Blvd., Bellwood, Ill.
Chicago Steel Furnace Co., 9326 S. Anthony Ave., Chicago 17, Ill.
Chicago Tramrail Co., 4000 W. Washington Blvd., Chicago 24, Ill.
Chimney-Furnace Corp., 400 Stonestreet Ave., Rockville, Md.
Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Fremont Av., Tonawanda, N. Y.
• Cincinnati Elbow Co., 2021 Eastern Ave., Cincinnati, Ohio.
Cincinnati Shaper Co., Hopple, Garrard & Elam, Cincinnati 25, Ohio.
Cincinnati Stamping & Furnace Co., 28 W. McMicken Ave., Cincinnati 10, Ohio.
Circo Tool Co., 902 W. Vliet St., Milwaukee 5, Wis.
Circulators & Devices Mfg. Corp., 128-168 32nd St., Brooklyn 32, N. Y.
Cirklair Products Div., Folsom Co., Inc., 3104 Oak Lane, Dallas 10, Texas.
• Clarsage Fan Co., North & Porter Sts., Kalamazoo 16, Mich.
Clark Bros. Bolt Co., Milldale, Conn.
Clark Co., Henry N., 56-62 Union St., Boston 8, Mass.
Clark Controller Co., 1146 E. 152 St., Cleveland 10, Ohio.
Clark Jr., Electric Co., James, 600 E. Bergman St., Louisville 3, Ky.
Clark Mfg. Co., H. J., 3rd & Oak Sts., Duarte, Calif.
Clark Stek-O Corp., 1631 Dewey Av., Rochester 15, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Clayton & Lambert Mfg. Co., Louisville Div., 1707 Dixie Hwy., Louisville 10, Ky., and Middletown, Ohio.
Clearing Machine Corp., 6499 W. 63rd St., Chicago 38, Ill.
Cleave-Brooks Co., Hev-E-Oil Burner Div., 326 E. Keefe Ave., Milwaukee 12, Wis.
Clemson Bros., Inc., Middletown, N. Y.
Cleveland Heater Co., 2310 Superior Av., N. E., Cleveland 14, Ohio.
• Cleveland Humidifier Co., 7802 Wade Park Av., Cleveland 3, Ohio.
Cleveland Punch & Shear Works Co., E. 40th & St. Clair Av., Cleveland 14, Ohio.
Cleveland Tramrail Div., Cleveland Crane & Engineering Co., 5866 E. 283rd St., Wickliffe, Ohio.
• Climatemaker Slide Rule Service Co., 1404 E. Washington St., Bloomington, Ill.
Climax Machinery Co., 301 S. LaSalle St., Indianapolis 6, Ind.
Clinton Metallic Paint Co., P. O. Box 278, Clinton, N. Y.
Coal-O-Matic Co., Trucksville, Pa.
• Coast Insulating Products, 2316 San Fernando Rd., Los Angeles 65, Calif.
Cole Hot Blast Mfg. Co., 3817 S. Racine Av., Chicago 9, Ill.
• Coleman Co., Inc., St. Francis & Second St., Wichita 1, Kans.
Cole-Sewell Engineering Co., 2288 University Av., St. Paul 4, Minn.
Columbia Burner Co., 729 Ewing St., Toledo 7, Ohio.
Columbia Specialty Co., Inc., 503 Bradley Blvd., Chevy Chase 15, Md.
Columbia Steel Co., Sub. United States Steel Corp., Russ Bldg., 235 Montgomery St., San Francisco 6, Calif.
Columbus Heating & Ventilating Co., 182 N. Yale Av., Columbus 16, Ohio.
Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.
Comfort Products Corp., 2220 S. Lamesa St., Dallas 2, Texas.
Commercialaire, Inc., 300 Pacific St., Brooklyn 2, N. Y.
Commercial Filters Corp., 18 W. Third St., Boston 27, Mass.
Commercial Shearing & Stamping Co., P. O. Box 719, Youngstown 1, Ohio.
Commonwealth Brass Corp., 5781-5835 Commonwealth Av., Detroit 8, Mich.
Commonwealth Co., 2127 W. Commonwealth Av., Alhambra, Calif.
• Compton Shear Co., W. H., 314 Camden St., Newark 3, N. J.
• Conco Engineering Works, Heating Division, Mendota, Ill.
Concrete Termite Drill Co., 2088 Foothill Blvd., Pasadena 8, Calif.
• Condensation Engineering Corp., 3511 W. Potomac Ave., Chicago 51, Ill.
Conditionaire Unit Co., 2821 Montrose Ave., Chicago 18, Ill.
Congress Drives, Div. Tann Corp., 3750 E. Outer Dr., Detroit 12, Mich.
Conklin Brass & Copper Co., Inc., T. E., 54-60 Lafayette St., New York 13, N. Y.
Conners Construction Co., Second & Luzerne Sts., Philadelphia 40, Pa.
Concor Engineering Corp., W. B., 300 Fifth Ave., New York 18, N. Y.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Connors Paint Mfg. Co., Wm., 669-683 River St., Troy, N. Y.
 Consolidated Industries, Inc., Lafayette, Ind.
 Continental Air-Filters, Inc., P. O. Box 1617, Louisville 1, Ky.
 Continental Instrument Co., 1530 St. Clair Ave., Cleveland 14, Ohio.
 Continental Products Co., 1150 E. 222nd St., Euclid 17, Ohio.
 Continental Screw Co., Mt. Pleasant St., New Bedford, Mass.
 • Continental Steel Corp., 1108 S. Main St., Kokomo, Ind.
 Continental Water Heater Co., 1801 Pasadena Av., Los Angeles 31, Calif.
 Controlair Mfg. Co., 1932 S. Compton St., Los Angeles 11, Calif.
 Cooper Co., Clark, Palmyra, N. J.
 Cooper & Cooper, Inc., 37 Penn St., Pittsfield, Mass.
 Cooper Oven Thermometer Co., Pequabuck, Conn.
 Coopers Creek Chemical Corp., West Conshohocken, Pa.
 Copeland Refrigeration Corp., Sidney, Ohio.
 Copperwell Steel Co., Box 1000, Glassport, Pa.
 Coppus Engineering Corp., 344 Park Ave., Worcester 2, Mass.
 Corbin Div., P & F, American Hardware Corp., 67 Park St., New Britain, Conn.
 Corbman Bros., Inc., 315 N. 7th St., Philadelphia 6, Pa.
 Cordo Chemical Corp., 34 Smith St., Norwalk, Conn.
 Cork Import Corp., 1 Engle St., Englewood, N. J.
 Cork Insulation Co., Inc., 155 E. 44th St., New York, N. Y.
 • Corlett-Turner Co., 1001 S. Kostner Ave., Chicago 24, Ill.
 Corroire Heater Corp., 1422 Euclid Ave., Cleveland 15, Ohio.
 Cotta Transmission Co., 2340 Eleventh St., Rockford, Ill.
 Coughlan Co., G. N., West Orange, N. J.
 Coz-Nef Corp., Bay Street, St. Johnsbury, Vt.
 Craftsman Plating & Tinning Corp., 3021 Greenview Ave., Chicago, Ill.
 Cramer Co., Inc., The R. W., Centerbrook, Conn.
 Cramer Mfg. Co., 5110 Westfield Ave., N. W., Canton, Ohio.
 Crandall Mfg. Co., 1512 W. Slauson, Los Angeles 44, Calif.
 Crane Co., 836 S. Michigan Av., Chicago 5, Ill.
 Cray, T. F., 396 N. Second St., Middleport, Ohio.
 • Crescent Tool Co., 230 Harrison St., Jamestown, N. Y.
 • Crise Controls Div., Acro Mfg. Co., 2040 E. Main St., Columbus 16, Ohio.
 Crocker-Wheeler Div., Elliott Co., Ampere 1, N. J.
 Cromley's, Lewisburg, Pa.
 Cronk Co., 2800 Gaston Ave., Dallas 1, Texas.
 Cross Engineering Co., 160-178 Dundaff St., Carbondale, Pa.
 Crown Controls Co., Inc., New Bremen, Ohio.
 Crown Iron Works Co., 1229 Tyler St., N. E., Minneapolis 13, Minn.
 Crucible Steel Co. of America, 405 Lexington Av., New York 17, N. Y.
 Cuno Engineering Corp., 80 S. Vine St., Meridan, Conn.
 Cuprometal Mfg. Corp., 44th Ave., & Junction Blvd., Corona, N. Y.
 Curley Electric Mfg. Co., 6104 W. Washington Blvd., Culver City, Calif.
 Curtis Refrigerating Machine, Div. Curtis Mfg. Co., 1946 Kienlen Av., St. Louis 20, Mo.
 Cutler-Hammer, Inc., N. 12th St., and W. St. Paul Av., Milwaukee 1, Wis.
 Cuyahoga Spring Co., 10254 Berea Road, Cleveland 2, Ohio.

D

Daffin Mfg. Co., North Prince St., Lancaster, Pa.
 • Dahlstrom Machine Works, 4970 N. Elston Av., Chicago 30, Ill.
 Dahlstrom Metallic Door Co., S. E. Cor. E. Second & Buffalo Sts., Jamestown, N. Y.
 Dalco Appliance Co., 1355 Market St., San Francisco 3, Calif.
 Daly, Merritt & Sullivan, Inc., West Broad St., Falls Church, Va.
 Dalzen Tool & Mfg. Co., 13650 E. 10 Mile Rd., Detroit 5, Mich.
 Damascus Steel Products Corp., 2215 Kishwaukee St., Rockford, Ill.
 Dana Fan & Blower Corp., 3501 Colerain Ave., Cincinnati 23, Ohio.
 Daniels Mfg. Co., Inc., Sam, Daniels Rd., Hardwick, Vt.
 Danzer Metal Works Co., Box 128, Hagerstown, Md.
 Dary Co., W. M., Long Beach, Calif.
 Davidson Hy Duty Roof Fan Co., 213 California St., Newton, Mass.
 Davis & Co., Dean W., Kentland, Ind.
 Davis Regulator Co., 2546 S. Washtenaw Av., Chicago 8, Ill.
 Davis & Son Machine Works, 8426 Compton Av., Los Angeles 1, Calif.
 Davison Chemical Corp., Baltimore 3, Md.
 Davison, Inc., Frank D., 428 Aliso St., Los Angeles 12, Calif.
 Day Co., 810 Third Av., N. E., Minneapolis 13, Minn.
 Day & Night Div., Affiliated Gas Equipment, Inc., P. O. Box 150, Monrovia, Calif.

Dayton Rogers Mfg. Co., 2830 13th Av., S. Minneapolis 7, Minn.
 Dayton Rubber Co., 2342 W. Riverview Av., Dayton 1, Ohio.
 Dearborn Stove Co., 5830 N. Pulaski Rd., Chicago 30, Ill.
 Dearborn Stove Co., 1700 W. Commerce St., Dallas 8, Texas.
 Debevoise Co., 968 Grand St., Brooklyn 6, N. Y.
 De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
 Decatur Iron & Steel Co., P. O. Box 72, Decatur, Ala.
 Defender Instrument and Regulator Co., 815 Clark Av., St. Louis 2, Mo.
 Delavan Mfg. Co., 3007 Sixth Ave., Des Moines 13, Iowa.
 • Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 1, N. Y.
 • Delco Products Div., General Motors Corp., 329 E. First St., Dayton, Ohio.
 D'Elia Oil Burner Co., 145 Stratford Ave., Bridgeport 8, Conn.
 Delta Heating Corp., 85-07 Northern Blvd., Jackson Hts., L. I., N. Y.
 Delta Mfg. Div., Rockwell Mfg. Co., 620 E. Vienna Ave., Milwaukee 3, Wis.
 Deluxe Furnace & Wall Heater Co., P. O. Box 489, Inglewood, Calif.
 DeLuxe Oil Burner Co., 2121 First Av., Seattle, Wash.
 • Demuth & Sons, Inc., Charles, 245 Elm Pl. Mineola, L. I., N. Y.
 Deniston Co., 4856 S. Western Ave., Chicago 9, Ill.
 Densewood Corp., Elkhorn, Wis.
 Denver Fire Clay Co., 2301 Blake St., Denver 17, Colo.
 Deshler Foundry & Machine Works, 140 S. East Ave., Deshler, Ohio.
 • Des Moines Furnace and Stove Repair Co., 107 S. W. Second Ave., Des Moines 3, Iowa.
 DeSoto Oil Burner Corp., 40 N. Penn St., York, Pa.
 Despatch Oven Co., 619 Southeast St., Minneapolis 14, Minn.
 Detroit Air Conditioning Service Co., 1314 Holden Ave., Detroit 2, Mich.
 Detroit Air Filter Co., Box 407, Woodstock, Ill.
 Detroit Gas Regulator Co., 742 Rivard St., Detroit 7, Mich.
 Detroit Hoist & Machine Co., 8202 Morrow St., Detroit 11, Mich.
 Detroit Lubricator Co., 5900 Trumbull Ave., Detroit 8, Mich.
 Detroit Moulding Div., I. A. Young Spring & Wire Corp., 9210 Russell St., Detroit 11, Mich.
 Detroit Safety Furnace Pipe Co., 5960 Second Blvd., Detroit 2, Mich.
 Detroit Stamping Co., 350 Midland Ave., Detroit 3, Mich.
 Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.
 Detroit Stoker Co., General Motors Bldg., Detroit 2, Mich.
 Detroit Universal Products, 8427 Mack, Detroit, Mich.
 Devices, Inc., 280 Madison Ave., New York 16, N. Y.
 DeVilbiss Co., The, 300 Phillips Ave., Toledo 1, Ohio.
 Devoe & Reynolds Co., Inc., 44th St. & 1st Ave., New York 17, N. Y.
 Diamond Agencies, 132 W. Union St., Pasadena 1, Calif.
 Diamond Castings Co., Terra Cotta Rd., Johnsbury, Pa.
 Diamond Expansion Bolt Co., Inc., 500 North Ave., Garwood, N. J.
 Diamond Iron Works, Inc., 1728 Second St., N., Minneapolis 11, Minn.
 Diamond Machine Tool Co., 3429 E. Olympic Blvd., Los Angeles 23, Calif.
 • Diamond Mfg. Co., 243 W. 8th St., Wyoming, Pa.
 Dicler Div., General Machine & Mfg. Co., Berwick, Pa.
 Dick Co., Inc., R. & L., 24-28 Sade St., Passaic, N. J.
 Dickson Co., 7420 Woodlawn Ave., Chicago 19, Ill.
 Dickson Weatherproof Nail Co., P. O. Box 590, Evanston, Ill.
 • Dieckmann Co., Ferdinand, 1180 Harrison Ave., Cincinnati 22, Ohio.
 Diehl Mfg. Co., 1117 Finnerme Av., Somerville, N. J.
 Diener Mfg. Co., Geo. W., 400 N. Monticello Av., Chicago 24, Ill.
 Diston & Sons, Inc., Henry, Unruh & Milnor Sts., Philadelphia 35, Pa.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 DoAll Co., 254 Laurel Ave., Des Plaines, Ill.
 Dockson Corp., 3839 Wabash Av., Detroit 8, Mich.
 Dodge Mfg. Corp., 500 S. Union St., Mishawaka, Ind.
 Doelzer & Kirsten, Inc., 3015 W. Chambers St., Milwaukee 10, Wis.
 • Dole Valve Co., 1933 W. Carroll Ave., Chicago 12, Ill.
 Dollinger Corp., 11 Centre Park, Rochester 3, N. Y.
 Domestic Devices, 1495 Warrensville Center Rd., Cleveland, Ohio.
 Domestic Mfg. Co., 2922 Western Ave., Seattle 1, Wash.
 Domestic Thermostat Co., 8775 Mettler St., Los Angeles 3, Calif.
 Dongan Electric Mfg. Co., 2981 Franklin St., Detroit 7, Mich.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Dornback Furnace & Foundry Co., 724 E. 103rd St., Cleveland 8, Ohio.
 Dow Chemical Co., Midland, Mich.
 • Dowagiac Steel Furnace Co., Beeson St., Dowagiac, Mich.
 • Downs-Smith Brass & Copper Co., Inc., 304-320 E. 45th St., New York 17, N. Y.
 • Doyle Vacuum Cleaner Co., 225 Stevens St., S. W., Grand Rapids 2, Mich.
 • Dravo Corp., Dravo Bldg., Pittsburgh 22, Pa.
 Drayer-Hanson, Inc., Box 2215, Terminal Annex, Los Angeles 54, Calif.
 Dreis Co., Ltd., Edward J., 841 County Rd., San Carlos, Calif.
 • Dreis & Krump Mfg. Co., 7404 Loomis Blvd., Chicago 36, Ill.
 • Drico Industrial Corp., 559 W. 35th St., New York 1, N. Y.
 Dry-Zero Corp., 222 W. North Bank Drive, Chicago 54, Ill.
 Dual-Air Fan Corp., P. O. Box 169, South Elgin, Ill.
 Dual Remote Control Co., Garden City, Mich.
 Dualflame Div., H & K Appliance Co., Lima, Ohio.
 • Duraltron Co., 322 Perry Hwy., Pittsburgh 29, Pa.
 Dual-X Furnace Mfg. Co., 6560 S. Wentworth Ave., Chicago 21, Ill.
 Dunn-Rite Products, P. O. Box 297, Garden City, Mich.
 Duo-Therm Div., Motor Wheel Corp., Lansing 3, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Durex, Inc., 5252 Broadway, Chicago 40, Ill.
 Dust Suppression & Engineering Co., 154 Grove St., Lake Orion, Mich.
 Dwyer Mfg. Co., F. W., 317 S. Western Ave., Chicago 12, Ill.

E

- Eagle-Picher Co., American Bldg., Central Pkwy. & Walnut, Cincinnati 1, Ohio.
 East Coast Co., 141 Milk St., Boston 9, Mass.
 Earl Co., Warren, 3409 McKinney Ave., Houston, Texas.
 Eastern Air Devices, Inc., 130 Flatbush Ave., Brooklyn 17, N. Y.
 Eastern Oil & Equipment Co., 27 Portland St., Portland 1, Maine.
 Eastern Stainless Steel Corp., P. O. Box 1975, Baltimore 3, Md.
 Easyheat Inc., 1601 Eastlake Ave., Seattle 2, Wash.
 Eav-Tex Co., 307 Lincoln Ave., Havertown, Pa.
 Eckhart Mfg. Co., Inc., 931 Lehigh Ave., P. O. Box 248, Union, N. J.
 Eclipse Air Brush Co., 390 Park Ave., Newark 7, N. J.
 Eclipse Fuel Engineering Co., 707 S. Main St., Rockford, Ill.
 Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Economy Gas Products Co., 8832 Michigan Ave., Detroit 10, Mich.
 • Economy Gas Furnace Co., 10 S. La Salle St., Chicago, Ill.
 Eddy Stoker Corp., 4717 W. North Ave., Chicago 39, Ill.
 Edison, Inc., Thomas A., Instrument Div., Lakeside Ave., West Orange, N. J.
 Edwards Furnace Co., 25 East Ave., Wellsboro, Pa.
 Edwards Mfg. Co., Inc., 337 Eggleston Ave., Cincinnati 2, Ohio.
 Ehret Magnesia Mfg. Co., Valley Forge, Pa.
 Eiermann Floor Scraper Co., 102 E. Market St., (rear), York, Pa.
 Eisher, Albert N., 755 Central, Dubuque, Iowa.
 Eisler Engineering Co., 761 S. 13th St., Newark 3, N. J.
 Elco Tool & Screw Corp., 1800 Broadway, Rockford, Ill.
 Electric Arc, Inc., 152 Jelliff Ave., Newark 8, N. J.
 Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 74, Ohio.
 Electric Furnace-Man, Inc., 4th & Furnace Sts., Emmaus, Pa.
 Electric Machinery Mfg. Co., 1137 Tyler St., N. E., Minneapolis 13, Minn.
 Electric Motor Corp., Div. Howard Industries, Inc., Racine, Wis.
 Electric Soldering Iron Co., Inc., W. Elm St., Deep River, Conn.
 Electric Spray Co., 1415 Illinois Ave., Sheboygan, Wis.
 Electrical Maintenance & Engineering Co., 12525 Euclid Ave., Cleveland 12, Ohio.
 Electromatic Div., The Simoniz Co., 2100 Indiana Ave., Chicago 16, Ill.
 Electro Dustless Painting, Inc., 1052 New Britain Ave., Elmwood 10, Conn.
 Electroaire Corp., 41-38 37th St., Long Island City 1, N. Y.
 Electric Dynamic Div., Electric Boat Co., Bayonne, N. J.
 Electro Lift, Inc., 32 Church St., New York 7, N. Y.
 Electro-Watt Inc., Mercer & Aurora, Seattle 9, Wash.
 • Electrol Burner Mfg. Co., Inc., 22 Union Ave., Rutherford, N. J.
 Electromode Corp., 41 Crouch St., Rochester 3, N. Y.
 Electronic Products Co., St. Charles, Ill.
 Electrovent Corp., 5245 Western Ave., Detroit 10, Mich.
 Electrovent Fan & Mfg. Co., 812 W. Lake St., Chicago 7, Ill.
 • Elco Shutter & Mfg. Co., 2738 W. Warren Ave., Detroit 8, Mich.
 Ellison Draft Gage Co., 214 W. Kinzie St., Chicago 10, Ill.
 Elmwood Mfg. Co., 3145 Chestnut St., Detroit 7, Mich.
 • Emerson Electric Mfg. Co., 8100 Florissant Ave., St. Louis 21, Mo.

- Empire Door Co., Inc., 431 Southern Blvd., New York 55, N. Y.
 Empire Metal Co., 820 E. Water St., Syracuse, N. Y.
 Empire Stove Co., Belleville, Ill.
 Empire Ventilation Equipment Co., 35-129 Vernon Blvd., Long Island City 1, N. Y.
 • Enderle, Inc., Ltd., Frank X., 1715 San Fernando Rd., Los Angeles 65, Calif.
 Engelhard, Inc., Chas., 900 Passaic Ave., East Newark, N. J.
 Enterprise Foundry, Inc., 1123 E. "B" St., Belleville, Ill.
 Erdle Perforating Co., 171 York St., Rochester 11, N. Y.
 Ergolyte Mfg. Co., 3627 N. Lawrence St., Philadelphia 40, Pa.
 Eselgroth & Co., 22 Edison Pl., Newark 2, N. J.
 Ess Instrument Co., 96 Washington Ave., Bergenfield, N. J.
 Essick Mfg. Co., 1950 Santa Fe Ave., Los Angeles 21, Calif.
 Estate Stove Co., Sub Noma Electric Corp., P. O. Box 418, Hamilton, Ohio.
 Etched Products Co., 3901 Queens Blvd., Long Island City 4, N. Y.
 Euclid Crane & Hoist Co., 1365 Chardon Rd., Euclid 17, Ohio.
 Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.
 Evans Products Co., Heating & Appliance Div., Plymouth, Mich.
 Even-Air Mfg. & Sales Co., 13931 Hamilton Ave., Detroit 3, Mich.
 Evercrete Corp., 19 W. 44th St., New York, N. Y.
 EverHot Heater Co., 5189 Wesson Ave., Detroit 10, Mich.
 Everhot Mfg. Co., 57 S. 19th Ave., Maywood, Ill.
 Everhot Products Co., 2059 W. Carroll Ave., Chicago 12, Ill.
 Eveready Supply Co., 3207 Gaston Ave., Dallas 2, Texas.
 Excel Heating & Air Conditioning Co., 3715 Belmont Ave., Chicago 18, Ill.
 Excelsior Steel Furnace Co., 118 S. Clinton St., Chicago 6, Ill.
 Excelsior Stove & Mfg. Co., 510 S. Front St., Quincy, Ill.
 Excelsior Tool & Machine Co., 31st & Ridge Ave., East St. Louis, Ill.
 Expert Welding Machine Co., 17144 Mt. Elliott St., Detroit, Mich.
 Extruded Plastics, Inc., New Canaan Ave., Norwalk, Conn.

F

- F & E Mfg. Co., Box D, Centerville, Calif.
 Fafnir Bearing Co., 37 Booth St., New Britain, Conn.
 Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.
 Fairfield Oil Heating Co., Inc., Greenwich, Conn.
 Fairmont Aluminum Co., P. O. Box 912, Fairmont, W. Va.
 Fairmount Tool & Forging Co., 10611 Quincy Ave., Cleveland 6, Ohio.
 • Fallsington Mfg. Co., Fallsington, Pa.
 Falstrom Co., 18 Falstrom Court, Passaic, N. J.
 Famco Machine Co., 1314 Eighteenth St., Racine, Wis.
 • Famous Furnace Co., 6420 Woodland Ave., Cleveland 4, Ohio.
 Farquhar Furnace Co., 230 Owens Ave., Wilmington, Ohio.
 Farr Co., 2615 Southwest Dr., Los Angeles 43, Calif.
 Farrelloy Co., 1243 N. 26th St., Philadelphia 21, Pa.
 Farris Furnace Co., 920-930 Enos Ave., Springfield, Ill.
 Fasco Industries, Inc., Box 509, Rochester 2, N. Y.
 Faultless Heater Corp., 10217 St. Clair Ave., Cleveland, Ohio.
 Favorite Stove Co., 440 Weber St., Piqua, Ohio.
 Feathertouch Products, Inc., 757 W. Venice Blvd., Los Angeles 15, Calif.
 Federal Machine & Welder Co., Overland Ave., Warren, Ohio.
 Federal Machinery Co., 134 Grand St., New York 13, N. Y.
 • Federated Metals Div., American Smelting and Refining Co., 120 Broadway, New York 5, N. Y.
 Fee & Mason Mfg. Co., Manassas, N. J.
 Fee & Stenwedel, Inc., 2210 Wabansia Ave., Chicago 47, Ill.
 Felters Co., Inc., 210 South St., Boston 11, Mass.
 Ferdon Equipment Engineering Co., 26 Evans Place, Hillside, N. J.
 Fern, Ralph, 2517 Boulevard Ave., Scranton 9, Pa.
 • Field Control Div., H. D. Conkey & Co., Drawer 11, Mendota, Ill.
 Fiester Co., F. J., 54 W. 21st St., New York 10, N. Y.
 Fiage Co., 1734 W. Ogden Ave., Chicago 12, Ill.
 Filkins, Inc., Edward, 308 W. Washington St., Chicago 6, Ill.
 Finger, Joe, 7907 Madison Ave., Cleveland 2, Ohio.
 Fingles Co., Reisterstown Rd. at Elgin Ave., Baltimore 17, Md.
 Finn Engineers, Inc., Jerry, 634 Grand Ave., St. Paul 5, Minn.
 Firecraft Corp., 3110 W. 51st St., Chicago 32, Ill.
 Fireline Stove & Furnace Lining Co., 1816 Kingsbury St., Chicago 14, Ill.
 Firestone Tire & Rubber Co., Firestone Park, Akron 17, Ohio.
 Firewel Co., Inc., 3693 Broadway, Buffalo 21, N. Y.
 Fisher Brass Foundry, 5332 S. Santa Fe Ave., Los Angeles 11, Calif.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Fisher Governor Co., 203 First Av., Marshalltown, Iowa.
 Flagler Mfg. Co., Roy G., 19321 Filer Ave., Detroit, Mich.
 Flemm Lead Co., Inc., Bradley Av. & School St., Long Island City 1, N. Y.
 Flexible Tubing Corp., Guilford, Conn.
 Flintkote Co., 30 Rockefeller Plaza, New York 20, N. Y.
 Flood Co., Hobson, Ohio.
 Floral City Heater Co., 402 S. Monroe St., Monroe, Mich.
 Florence Stove Co., 205 School St., Gardner, Mass.
 Floridin Co., Drawer 148, Warren, Pa.
 Flour City Brush Co., 301 Fifth Ave., S., Minneapolis 15, Minn.
 Fluid Heat Div. Anchor Post Products, Inc., 6720 Eastern Av., Baltimore 24, Md.
 Flux-All Chemical Products, 4018 Tenth Av., New York 34, N. Y.
 Flynn & Emrich Co., 301 Holliday St., Baltimore 2, Md.
 • Follansbee Steel Corp., Third & Liberty Aves., Pittsburgh 30, Pa.
 Folsom Snow Guard Co., 336 Union St., Millis, Mass.
 Foote Foundry Co., J. B., N. Main St., Fredericktown, Ohio.
 Ford Blow Pipe & Mfg. Co., 285 Poplar Av., Memphis 1, Tenn.
 Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa.
 Ford Motor Co., Dearborn, Mich.
 • Forest City Foundries Co., Niagara Furnace Div. 2500 W. 27th St., Cleveland 13, Ohio.
 Form-Weld Co., Inc., 660 Minnesota St., San Francisco 7, Calif.
 Fossum Mfg. Co., M. H. 1565 Como Av., St. Paul, Minn.
 Fox Noiseless Hammer Co., 77 Green Hill Rd., Media, Pa.
 Foxboro Co., 38 Neponset Ave., Foxboro, Mass.
 Fram Corp., Providence 16, R. I.
 Franck & Fric, 7109 Kinsman Rd., Cleveland 4, Ohio.
 Frankland Corp., 2640 Goodrich Ave., Ferndale, Mich.
 Franklin Electric Co., Inc., 116 E. Washington St., Bluffton, Ind.
 Fraser & Johnson Co., 1900 17th St., San Francisco 3, Calif.
 Frayn Co., N. J., P. O. Box 1005, Redwood City, Calif.
 Frederick Iron & Steel, Inc., Frederick, Md.
 Freed Heater & Stoker Co., 1242 Widener Bldg., Philadelphia 7, Pa.
 Freed Products Co., 1510 Third Ave., Moline, Ill.
 Freeport Burner & Fan Co., Freeport, Ill.
 Fresh Air Circulator Co., 3108 Navigation, Houston 3, Texas.
 Fresh-Aire Co., 221 N. LaSalle St., Chicago 1, Ill.
 • Frey & Co., Frank P., 2634 W. Madison St., Chicago 12, Ill.
 Frick Co., W. Main St., Waynesboro, Pa.
 Fried Air-Kool Co., 2930 Grand River, Detroit 1, Mich.
 Friedley-Voshart Co., 763 W. Lexington St., Chicago 7, Ill.
 Friendly Furnace & Foundry Co., 2405 E. Fourth St., Sioux City 19, Iowa.
 Friez Instrument Div., Bendix Aviation Corp., Taylor Av. & Loch Raven Blvd., Baltimore 4, Md.
 Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton, 1, Ohio.
 Front Rank Furnace Co., Div. Liberty Foundry Co., 2500 Ohio Av., St. Louis 4, Mo.
 Fry Reglet Corp., 1725 N. Pennsylvania Ave., P. O. Box 411, Bremerton, Wash.
 Fuel Savers, Inc., 1301 Herr St., Harrisburg, Pa.
 Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Box 400, Knoxville 4, Tenn.
 Furblo Co., Hermansville, Mich.
 Fusion Engineering, 4504 Superior Ave., Cleveland 3, Ohio.
- G**
- G. M. Mfg. Co., 50 W. Third St., New York 12, N. Y.
 G. & O. Mfg. Co., 138 Winchester Av., New Haven 8, Conn.
 G. & S. Machine Shop, 8700 Grinnell, Detroit 13, Mich.
 Gallaher Co., Owatonna, Minn., and Omaha, Neb.
 • Galvan Mfg. Co., Box 267, New Albany, Ind.
 Gammett Co., W. F., Lincoln Av., Cadiz, Ohio.
 Garden City Fan Co., 332 S. Michigan Blvd., Chicago 4, Ill.
 Garden City Laboratory, Div. Pritchardsons, 2744 W. 37th Pl., Chicago 32, Ill.
 Gasco Industries, Inc., 2054 National Bank Bldg., Detroit 26, Mich.
 Gas & Oil Industry Laboratories, Inc., 4 Paine Av., Irvington 11, N. J.
 Gates Rubber Co., Inc., 999 S. Broadway, Denver 17, Colo.
 Gaul Air Conditioner Co., 3116 N. Main St., Dayton 5, Ohio.
 Gehri Co., 1117 Tacoma Ave., Tacoma 3, Wash.
 Geisel Mfg. Inc., 61 West Av., Elyria, Ohio.
 Gematic Burner Co., 16830 Miles Av., Cleveland 22, Ohio.
 General Automatic Products Corp., 2300 Sinclair Lane, Baltimore, Md.
 General Blower Co., 8600 Ferris Av., Morton Grove, Ill.
 General Blower Co., Inc., 6137 Market St., Philadelphia 39, Pa.
 General Controls Co., 801 Allen Av., Glendale 1, Calif.
 General Corp., 3553 University Av., Minneapolis 14, Minn.
 General Die and Stamping Co., 262 Mott St., New York 12, N. Y.
 • General Electric Co., Appliance & Merchandise Dept., 1285 Boston Av., Bridgeport 2, Conn.
 General Electric Co., Automatic Heating Div., 9 Lawrence St., Bloomfield, N. J.
 • General Electric Co., 1 River Rd., Schenectady 5, N. Y.
 General Electric Co., Lamp Dept., Nela Park, Cleveland 12, Ohio.
 General Engineering & Mfg. Co., 4417 Oleatha St., St. Louis 16, Mo.
 • General Filters, Inc., 12890 Westwood Av., Detroit 23, Mich.
 General Gas Light Co., 201 N. Park St., Kalamazoo 11F, Mich.
 General Machinery Co., 3500 Riverside Av., Spokane 1, Wash.
 General Oil Heating Corp., 322-6 35th St., West New York, N. J.
 General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 General Refrigeration Div., Yates-American Machine Co., Shirland Av., Beloit, Wis.
 General Scientific Equipment Co., 27th & Huntington Sts., Philadelphia 32, Pa.
 General Sheet Metal Works, Inc., Silliman Av. & Ash St., Bridgeport 3, Conn.
 General Water Heater Corp., Front St. & Magnolia Blvd., Box 471, Burbank, Calif.
 • Gerrett Corp., M. A. 724 W. Winnebago St., Milwaukee 5, Wis.
 Gerhardt, W. F., 2007 W. Broad St., Richmond 20, Va.
 Gerhardt Co., Inc., George T., 1030 Golden Gate Ave., San Francisco, Calif.
 Gilbert & Barker Mfg. Co., West Springfield, Mass.
 Gillen Co., J. L., Dowagiac, Mich.
 Gilmer Co., L. H., Div. United States Rubber Co., Cottman & Keystone Sts., Philadelphia 35, Pa.
 Gilmore & Co., Jackson G., 167 E. State St., Columbus 15, Ohio.
 Gisholt Machine Co., 1235 E. Washington Av., Madison 10, Wis.
 Glasby Mfg. Co., Inc., J. P., Montgomery & Willett Sts., Belleville 9, N. J.
 Glaser Lead Co., Inc., 31 Wyckoff Av., Brooklyn 27, N. Y.
 Glasfloss, 155 E. 44th St., New York 17, N. Y.
 Glenn-Roberts Co., P. O. Box 12, Fruitvale Sta., Oakland 1, Calif. and 2107 Adams St., Indianapolis 1, Ind.
 Glidden Co., 11001 Madison Av., Cleveland 2, Ohio.
 Globe Machinery & Supply Co., E. 1st & Court Av., Des Moines 6, Iowa.
 Globe Roofing Products Co., Inc., 2207 Schrage Av., Whiting, Ind.
 Goergen-Mackwirth Engineering Co., 813 Sycamore St., Buffalo 12, N. Y.
 Goethel Sheet Metal Works, Inc., Alfred, 1912 N. Killian Pl., Milwaukee 12, Wis.
 Goettl Bros., 714 S. Central Av., Phoenix, Ariz.
 Golden-Anderson Valve Specialty Co., Keenan Bldg., Pittsburgh 22, Pa.
 Golden Gate Sheet Metal Works, 1422 14th Ave., Oakland 6, Calif.
 Golden's Foundry & Machine Co., P. O. Box 96, Columbus, Ga.
 Goldsmith Metal Lath Co., 4501 Chickering Ave., Cincinnati 32, Ohio.
 Goodfriend Plumbing & Heating Burner Sales, 13931 Hamilton, Detroit, Mich.
 Goodrich Co., B. F., 500 S. Main St., Akron, Ohio.
 Goodyear Tire & Rubber Co., Inc., 1144 E. Market St., Akron 16, Ohio.
 Goss Gas Products Co., 5209 Baum Blvd., Pittsburgh 24, Pa.
 Gouran, Inc., Mark F., 7309 Boyer St., Philadelphia 19, Pa.
 Governair Corp., 513 N. Blackwelder, Oklahoma City 1, Okla.
 Graham Hambly Co., 3625 S. Grand Av., Los Angeles 7, Calif.
 Grand Island Furnace & Supply Co., 356 N. Elm St., Grand Island, Neb.
 Grand Rapids Wire Products Co., 503 Front Av., N. W., Grand Rapids 4, Mich.
 Granite City Steel Co., 20th & Madison Av., Granite City, Ill.
 Gray, G. L., 295 East St., P. O. Box 520, New Haven 3, Conn.
 • Gray & Dudley Co., 2300 Clifton Rd., Nashville, Tenn.
 • Gray Metal Products, Inc., 30 Carleton St., Rochester, N. Y.
 Grayson Controls Div., Robertshaw-Fulton Controls Co., 3000 Imperial Highway, Lynwood, Calif.
 Grayson-Greenamyer, Inc., P. O. Box 88, Monrovia, Calif.
 Gray-Wilson Co., 6460 Kercheval Av., Detroit 7, Mich.
 Great National Air Conditioning Corp., Sub. U. S. Air Conditioning Corp., 342 Oklahoma Natural Bldg., Oklahoma City, Okla.
 Green Colonial Furnace Co., 322 S. W. Third St., Des Moines 7, Iowa.
 Green Fire Brick Co., A. P., Mexico, Mo.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Greenberg's Sons, M., 763 Folsom St., San Francisco 7, Calif.
Greene, Tweed & Co., North Wales, Pa.
Gregory Co., J. G., 228 N. LaSalle St., Chicago 1, Ill.
Grinnell Co., Inc., 260 W. Exchange, Providence 1, R. I.
Griscom-Russell Co., The 285 Madison Ave., New York 17, N. Y.
Griswold Mfg. Co., 1001-1065 W. 12th St., Erie, Pa.
Groß Bros., Grafton, Wis.
Gross-Aire Mfg. Co., 9416 W. Milton Ave., St. Louis 14, Mo.
Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.
• Gustin-Bacon Mfg. Co., 1412 W. 12th St., Kansas City 7, Mo.

H

H-A Mfg. Co., 444 Salem Ave., York, Pa.
H-B Instrument Co., 2633 Trenton Ave., Philadelphia 25, Pa.
H & H Research Co., 6303 Horatio Ave., Detroit 10, Mich.
H-P Products, Inc., 510 W. Broad St., Louisville, Ohio.
H P L Mfg. Co., 2015 E. 65th St., Cleveland 3, Ohio.
Hague & Co., Alfred, 224 34th St., Brooklyn 32, N. Y.
Haines Gauge Co., Inc., 2301 W. Allegheny Ave., Philadelphia 32, Pa.
• Hall-Neal Furnace Co., 1326 N. Capitol Ave., Indianapolis 7, Ind.
Hamilton Tool Co., Ninth St. at Hanover, Hamilton, Ohio.
Hammer Boiler & Tank Co., 6025 W. 66th St., Chicago, Ill.
• Hammel Radiator Engineering Co., 3348 Motor Ave., Los Angeles 34, Calif.
Hammett Electric Mfg. Co., 706 E. Eighteenth St., Kansas City 8, Mo.
Hammond Machinery Builders, Inc., 1694 Douglas Ave., Kalamazoo 34, Mich.
Hampton Electric Mfg. Co., 1238 Voskamp St., Pittsburgh 12, Pa.
Handees Co., Dept. R-161, Bloomington, Ill.
Handelan Washed Air Co., 4006 Washburn Ave., South Minneapolis, Minn.
• Handley-Brown Heater Co., 2501 Brooklyn Rd., Jackson, Mich.
Handy & Harman, 82 Fulton St., New York 7, N. Y.
Hanlan Co., 1416 W. Jefferson Blvd., Los Angeles 7, Calif.
Hansen Electric Co., 680 Valencia St., San Francisco 10, Calif.
Harnischfeger Corp., 4400 W. National Ave., Milwaukee 14, Wis.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
Harrington Co., 1640 W. Callowhill St., Philadelphia 30, Pa.
Harrington & King Perforating Co., 5649 Fillmore St., Chicago 44, Ill.
Harris, A. R., 4546 Hohman Ave., Hammond, Ind.
Harris Calorific Co., 5501 Cass Ave. N. W., Cleveland 2, Ohio.
Harris Machinery Co., 501 30th Ave., S. E., Minneapolis 14, Minn.
Harrison Sheet Steel Co., 4718 W. Fifth Ave., Chicago 44, Ill.
• Hart & Cooley Mfg. Co., 500 E. Eighth St., Holland, Mich.
Hart & Crouse Corp., 109 N. Warner St., Oneida, N. Y.
Hart Furnace and Supply Co., 238 E. Main St., Louisville 2, Ky.
Hart Mfg. Co., Bartholomew & Hamilton Sts., Hartford 1, Conn.
Hart-Mun Furnace Co., 2507 E. 15th St., Tulsa 5, Okla.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., 1025 Roosevelt Ave., Piqua, Ohio.
Harvey Machine Co., Inc., 19200 S. Western Ave., Torrance, Calif.
Harvey, Inc., Sid, 100 E. Mineola Ave., Valley Stream, N. Y.
Harvey-Whipple, Inc., 55 Emery St., Springfield 1, Mass.
Hasko Utilities Co., 879 Tenth Ave., New York 19, N. Y.
Haskins Co., R. G., 2651 W. Harrison St., Chicago 12, Ill.
Hassall, Inc., John, Clay & Oakland Sts., Brooklyn 22, N. Y.
Hastings Air Conditioning Co., Inc., Box 474, 108 S. Colorado Ave., Hastings, Neb.
Hastings Instrument Co., Inc., P. O. Box 1275, Hampton, Va.
Hauck Mfg. Co., 124-136 Tenth St., Brooklyn 15, N. Y.
Hauserman Co., E. F., 6800 Grant Ave., Cleveland 5, Ohio.
Hayes Furnace & Mfg. Co., 2929 S. Fairfax Ave., Los Angeles 16, Calif.
Hays Corp., 782 E. Eighth St., Michigan City, Ind.
Hays Mfg. Co., 801 W. 12th St., Erie 6, Pa.
Healy-Ruff Co., 765 Hampton Ave., St. Paul 4, Minn.
Heartley Machine & Tool Co., 900-8 Summit St., Toledo, Ohio.
Hestcraft Co., 419 W. Main St., Louisville 2, Ky.
Heat Hustler Co., 1404 E. Washington St., Bloomington, Ill.
Heating Assurance, Inc., 124 E. Augusta Ave., Spokane 13, Wash.
Heating Equipment Mfg. Co., 600 Indiana St., San Francisco 7, Calif.
Heating Research Corp., 516 North Jefferson, Muncie, Ind.
Heating Specialties Co., Carroll P. O., Baltimore 29, Md.
Heatlox Furnaces, Inc., 4320 S. Tacoma Way, Tacoma 9, Wash.

Heat-Seal Burner Co., 2018 Cuming Ave., Omaha 2, Nebr.
Heat-Timer Corp., 520 Broadway, New York 12, N. Y.
Heat-Well Mfg. Co., 1526 Park Ave., Emeryville 8, Calif.
Heetritter Co., 600 1/2 E. First St., Newberg, Ore.
Hegeler Zinc Co., P. O. Box 599, Danbury, Ill.
Heil Co., 3000 W. Montana St., Milwaukee 1, Wis.
Hemp & Co., Inc., Macomb, Ill.
Hemphill Co., A. D., Lake City, Minn.
Henderson & Co., Peter, 35 Cortland St., New York 7, N. Y.
• Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Hendley & Whitmore Co., 6 Blackhawk Blvd., Beloit, Wis.
Hendrick Mfg. Co., 37 Dundaff St., Carbondale, Pa.
Henkel-Clauss Co., Fremont, Ohio.
Henry & Wright Div., Hartford-Empire Co., 760 Windsor St., Hartford 1, Conn.
• Henry Furnace Co., Medina, Ohio.
Herbert & Sons, R. D., 6th & Harrison St., Nashville 4, Tenn.
Herco Oil Burner Corp., 109 W. Chestnut St., Lancaster, Pa.
Hercules Chemical Co., Inc., 332 Canal St., New York 13, N. Y.
Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
Herd Utilities, Inc., 303 Canal St., Providence 3, R. I.
Heremetal Co., 1310 Aldrich Ave. N., Minneapolis 11, Minn.
Herron-Zimmers Molding Co., 3900 E. Outer Drive, Detroit, Mich.
Hershey Machine & Foundry Co., Manheim, Pa.
• Hess-Snyder Co., Massillon, Ohio.
• Hess Co., The, 1855 S. 34th Ave., Chicago 50, Ill.
Hetzl Roofing Products Co., 67 Main St., Newark 5, N. J.
Hexacon Electric Co., 275 W. Clay Ave., Roselle Park, N. J.
Hexdall, A. M., Morris, Ill.
Highland Engineering Co., 1742 Berkeley St., Santa Monica, Calif.
Hill & Co., E. Vernon, 6829 W. Highland Ave., Chicago 31, Ill.
Hill-Chase & Co., Inc., 2223 E. Ontario St., Philadelphia 34, Pa.
Hillwood Mfg. Co., 21700 St. Clair Ave., Cleveland 17, Ohio.
Hilo Varnish Corp., 42-60 Stewart Ave., Brooklyn 6, N. Y.
Hinde & Dauch Paper Co., P. O. Box 861, Sandusky, Ohio.
Hi-Qua Mfg. Co., 4709 Grisco St., Philadelphia 24, Pa.
Hirsh Mfg. Co., P. O. Box 265, Garland, Texas.
Hirschman-Pohle Co., Inc., 9 Lent Ave., LeRoy, N. Y.
Hobart Bros. Co., Canal Lock Square, Troy 1, Ohio.
Hobbsite Products Co., Inc., 835 River St., Paterson 4, N. J.
Hodell Chain Co., 3924 Cooper Ave., Cleveland 3, Ohio.
Holcomb & Hoke Mfg. Co., Inc., 1545 Van Buren St., Indianapolis 7, Ind.
Holden Fan Co., 2503 Danforth, Detroit 12, Mich.
Hollup Corp., Div. National Cylinder Gas Co., 4700 W. 19th St., Chicago 50, Ill.
Holly Mfg. Co., 875 S. Arroyo Parkway, Pasadena 2, Calif.
Holtzer-Cabot Div. National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass.
HomEas Products Div., Bogue Electric Co., Inc., 52 Iowa Ave., Paterson 3, N. J.
Home Furnace Co., 280 E. 6th St., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Hones, Inc., Charles A., 122 S. Grand Ave., Baldwin, N. Y.
Hood Co., B. Mifflin, Daisy, Tenn.
Hook & Ackerman, Inc., 18 E. 41st St., New York 17, N. Y.
Hook & Miller, 130 Latham St., Pittsburgh 6, Pa.
Horn Co., Inc., A. C. 10th St. & 44th Ave., Long Island City 1, N. Y.
Horn-Sullivan Co., 727 Brannan St., Francisco 3, Calif.
Horsman-Markin Corp., 2161 Penobscot Bldg., Detroit 26, Mich.
• Hossfeld Mfg. Co., 460 W. Third St., Winona, Minn.
Hotentot Co., Inc., 2423 Farnham St., Omaha 2, Nebr.
Hotstream Heater Co., 2365 E. 69th St., Cleveland 4, Ohio.
Houston Blow Pipe & Sheet Metal Works, 113 Broadway, Houston 1, Texas.
Howe Ice Machine Co., 2825 Montrose Ave., Chicago 18, Ill.
Howell Engineering Corp., P. O. Box 111, Oregon, Ill.
Howes-Woods Co., 210 Bridge St., Cambridge 41, Mass.
Hoyt Heater Co. of No. Calif., 926 High St., Oakland, Calif.
Hub Specialty Co., 53 Salem St., Reading, Mass.
Hubbell Corp., 319 N. Albany Ave., Chicago 12, Ill.
Huck Mfg. Co., 2480 Bellevue Ave., Detroit 7, Mich.
Hueller Mfg. Co., Inc., H. J., 359 Rogers Ave., Brooklyn 25, N. Y.
Hunter Fan & Ventilating Co., 400 S. Front St., Memphis 2, Tenn.
Hupp Corp., Globe Stamping Div., 1250 W. 76th St., Cleveland 2, Ohio.
• Hussey & Co., C. G., 2850 Second Ave., Pittsburgh 19, Pa.
Hutchinson Burner & Mfg. Co., 517 N. Main, Hutchinson, Kans.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Huwer Heating Corp., R. R. 2, Milford, Mich.
 Huyette Co., Inc., Paul B., 401 N. Broad St., Philadelphia 8, Pa.
 Hyman & Sons, Joseph, Tioga, Livingston and Almond St., Philadelphia 34, Pa.
 Hynes & Cox Electric Corp., 406 N. Pearl St., Albany, N. Y.

I

Ideal Electric & Mfg. Co., E. First & Oak Sts., Mansfield, Ohio.
 Ideal Heating Corp., 807 E. Gage Ave., Los Angeles 1, Calif.
 Ideal Industries, Inc., 1084 Park Ave., Sycamore, Ill.
 Ideal Products Co., 71 Lake Dr., Oshkosh, Wis.
 Iden Co., 1805 N. Milwaukee Ave., Chicago, Ill.
 Ilg Electric Ventilating Co., 2850 N. Crawford Av., Chicago 41, Ill.
 Illinois Bronze Powder Co., Inc., 2023 S. Clark St., Chicago 16, Ill.
 Illinois Engineering Co., 2035 S. Racine Av., Chicago 8, Ill.
 Illinois Iron & Bolt Co., Freeman Stoker Div., 914 S. Michigan Av., Chicago 5, Ill.
 Illinois Testing Laboratories, Inc., 420 N. LaSalle St., Chicago 10, Ill.
 Illinois Zinc Co., 2959 W. 47th St., Chicago 32, Ill.
 Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago 7, Ill.
 Imperial Electric Co., 64 Ira Av., Akron 9, Ohio.
 Independence Stove & Furnace Co., Cor. Hayward & Cottage, Independence, Mo.
 Independent Nail & Packing Co., P. O. Box N. Bridgewater, Mass.
 Independent Pneumatic Tool Co., Aurora, Ill.
 Independent Register Co., 3747 E. 93rd St., Cleveland 5, Ohio.
 Industrial Brownhoist Corp., 135 Washington, Bay City, Mich.
 Industrial Engineering Corp., 206 N. Ninth St., Terre Haute, Ind.
 Industrial Mfg. & Engineering Co., 3845 N. Ravenswood Av., Chicago 13, Ill.
 Industrial Screw Co., 711 W. Lake St., Chicago 6, Ill.
 Industrial Service Laboratories, 7656 W. Forest Home Av., Milwaukee 14, Wis.
 Infra Insulation, Inc., 10 Murray St., New York, N. Y.
 Ingersoll Products Div., Borg-Warner Corp., 760 E. Vine St., Kalamazoo, Mich.
 Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y.
 Ingersoll Steel Div., Borg-Warner Corp., 310 S. Michigan Ave., Chicago 4, Ill.
 Ingram Machinery Co., P. O. Box 305, Picher, Okla.
 Inland Steel Co., 38 S. Dearborn St., Chicago 3, Ill.
 Inland Steel Container Co., 6532 S. Menard St., Chicago 38, Ill.
 Inland Steel Products Co., 4023 W. Burnham St., Milwaukee 1, Wis.
 Insto-Gas Corp., 1977 E. Woodbridge St., Detroit 7, Mich.
 Insulating Equipment, Inc., 39 S. LaSalle St., Chicago 3, Ill.
 Insulation & Refractories Co., Williamson, N. Y.
 Insulite Div., Minnesota and Ontario Paper Co., 500 Baker Arcade Bldg., Minneapolis 2, Minn.
 Inter-Coastal Paint Co., 13th & Southern R. R. East St. Louis, Ill.
 International Engineering, Inc., 1145 Bolander, Dayton 1, Ohio.
 International Heater Co., 101 Park Av., Utica 2, N. Y.
 International Metal Products Co., 528 S. 15th St., Phoenix, Ariz.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 International Oil Burner Co., Park & Spring, St. Louis 10, Mo.
 International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.
 International Sales Co., 2045 Evans Av., San Francisco 24, Calif.
 International Steel Co., 1556 Edgar St., Evansville, Ind.
 International Vermiculite Co., Girard, Ill.
 Interstate Machinery Co., Inc., 1433 W. Pershing Road, Chicago 9, Ill.
 Interstate Sales Co., 123 E. 18th St., New York 3, N. Y.
 Iona Ventilator Co., Inc., 2821-29 W. Dauphin St., Philadelphia 32, Pa.
 Iowa Paint Mfg. Co., 118-20 Eighth St., Des Moines 9, Iowa.
 Iron Lung Ventilator Co., 4019 Prospect Ave., Cleveland 3, Ohio.
 Iron Fireman Mfg. Co., 3121 W. 106th St., Cleveland 11, Ohio; 4784 S. E. 17th St., Portland, Ore.
 Irvington Varnish and Insulator Co., 6 Argyle Terrace, Irvington 11, N. J.
 Iwan Bros., Inc., 1503 Prairie Ave., South Bend 14, Ind.

J

J & J Sheet Metal Co., 23836 Hoover Rd., Van Dyke, Mich.
 Jabsco Pump Co., 2031 N. Lincoln, Burbank, Calif.

Jack & Heintz Precision Industries Inc., 17600 Broadway, Cleveland 1, Ohio.
 Jackes-Evans Mfg. Co., 4400 N. Union Blvd., St. Louis 15, Mo.
 Jackson & Church Co., 321 N. Hamilton St., Saginaw 65, Mich.
 Jackson Gas Burner Corp., 8781 Quincy Av., Detroit 4, Mich.
 Jaden Mfg. Co., 1601 W. 2nd St., Hastings, Nebr.
 Jae Mfg. Co., Mt. Clemens, Mich.
 James Regulator Co., Inc., 2nd & Pine Sts., Hamburg, Pa.
 Jamestown Metal Corp., 104 Blackstone Av., Jamestown 6, N. Y.
 Jan-Air Inc., Richmond, Ill.
 Jefferson Electric Co., 25th & Madison St., Bellwood, Ill.
 Jefferson Machine Tool Co., Fourth, Cutter & Sweeney Sts., Cincinnati 3, Ohio.
 Jenn Air Products Co., 409 Architects Bldg., Indianapolis 4, Ind.
 Jessop Steel Co., Lock Box 489, Washington, Pa.
 Jessup Signal Gauge Co., 1390 W. Minnehaha Pkwy., Minneapolis 9, Minn.
 Jet-Heat, Inc., 152 S. Van Brunt St., Englewood, N. J.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Johnson Co., S. T., 940 Arlington Av., Oakland 8, Calif., and 401 N. Broad St., Philadelphia 8, Pa.
 Johnson Fan & Blower Corp., 1319 W. Lake St., Chicago 7, Ill.
 Johnson Gas Appliance Co., 520 "E" Av., N. W., Cedar Rapids Iowa.
 Johnson Heater Corp., 12 Newhall Av., Saugus, Mass.
 Johnson, Inc., William, Brenner & Kent Sts., Newark 3, N. J.
 Johnson Ladder & Shoe Co., Eau Claire, Wis.
 Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
 Johnson Service Co., 507 E. Michigan St., Milwaukee, Wis.
 Johnston & Chapman Co., 2925 Carroll Ave., Chicago 12, Ill.
 Johnston Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.
 Johnston Gas Furnace Corp., Ltd., 11847 Vose St., North Hollywood, Calif.
 Jones & Laughlin Steel Corp., Third Av., & Ross St., Pittsburgh 30, Pa.
 Jones Foundry & Machine Co., W. A., 4401 W. Roosevelt Rd., Chicago 24, Ill.
 Jordan & Co., Inc., Paul R., 311 E. South St., Indianapolis 4, Ind.
 Josam Mfg. Co., 1783 E. 11th St., Cleveland 14, Ohio.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
 Junior Co., J. C., 444 E. 63rd St., Kansas City, Mo.
 Juniper Elbow Co., Inc., 72-15 Metropolitan Av., Middle Village, L. I., N. Y.

K

Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif.
 Kalamazoo Stove & Furnace Co., 433 Rochester Av., Kalamazoo 6, Mich.
 Kane & Roach, Inc., Niagara & Shonnard Sts., Syracuse 4, N. Y.
 Katelman Foundry & Mfg. Co., Third Av. & Eleventh St., Council Bluffs, Iowa.
 Kathe Controls, 9711 Euclid Ave., Cleveland 6, Ohio.
 Kauffman Air Conditioning Corp., 4505 Olive St., St. Louis 8, Mo.
 Kaufman Co., H. J., 13215 Roselawn Ave., Detroit 4, Mich.
 Kaustine Co., Inc., 1492 Washington Ave., Perry, N. Y.
 Kawneer Co., Niles, Mich.
 Keasbey & Mattison Co., Butler Av., Ambler, Pa.
 Keasbey Co., Robert A., 139 W. 19th St., New York 11, N. Y.
 Keckley Co., O. C., 400 W. Madison St., Chicago 6, Ill.
 Kehm Corp., 135 S. LaSalle St., Chicago, Ill.
 Keith Furnace Co., Dean Av., at E. 26th, Des Moines 17, Iowa.
 Keller Tool Co., P. O. Box 268, Grand Haven, Mich.
 Kelsey Heating Co., Inc., 277 James St., Syracuse 2, N. Y.
 Kemode Mfg. Co., 2 W. 46th St., New York 11, N. Y.
 Ken-Joy Gas Burner Co., 3231 W. National Av., Milwaukee 4, Wis.
 Kennametal, Inc., Latrobe, Pa.
 Kennard Corp., 1819 S. Hanley Rd., St. Louis 17, Mo.
 Kennedy, Inc., David E., 58 Second Ave., Brooklyn 15, N. Y.
 Kensico Tube Co., Mt. Kisco, N. Y.
 Kent Co., Inc., 435 Canal St., Rome, N. Y.
 Kerentoff, G. L., 2218 Reading Road, Cincinnati 2, Ohio.
 Kernchen Co., 333 N. Michigan Av., Chicago 1, Ill.
 Kerotest Mfg. Co., 2525 Liberty Av., Pittsburgh 22, Pa.
 Kester Solder Co., 4201 Wrightwood Av., Chicago 39, Ill.
 Keystone Asphalt Products Co., 43 E. Ohio St., Chicago 11, Ill.
 Keystone Flashing Co., 2310 N. 28th St., Philadelphia 32, Pa.
 Kidder Mfg. Co., Inc., J. F., 426 Colchester Av., Burlington, Vt.
 Kilbury Mfg. Co., Inc., 14529 Hawthorne Blvd., Lawndale, Calif.
 Kileone Mfg. Co., Westerville, Ohio.
 Killam Gas Burner Co., 260 Broadway, Denver 9, Colo.
 Kimberly-Clark Corp., Neenah, Wis.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Kindi-Aire Corp., 1480 W. 112th St., Cleveland 2, Ohio.
 King Metal Co., 414 N. W. Fourth St., Oklahoma City 3, Okla.
 King Co., Box 178, Owatonna, Minn.
 • Kingston-Conley Div., Hoover Co., 70 Brook Ave., North Plainfield, N. J.
 • Kingston Products Corp., Tipton Div., Tipton, Ind.
 • Kirk & Blum Mfg. Co., 2883 Spring Grove Ave., Cincinnati 25, Ohio.
 Kirk & Son, Inc., Morris P., 2717 S. Indiana St., Los Angeles 23, Calif.
 Kisco Co., Inc., 2400-40 DeKalb St., St. Louis 4, Mo.
 Klauer Mfg. Co., 9th & Washington St., Dubuque, Iowa.
 Kleenair Furnace Co., 5329 N. E. Sandy Blvd., Portland 13, Ore.
 Kleen-Hest, Inc., 1823 Carroll Ave., Chicago 12, Ill.
 Klem Chemicals, Inc., 14401 Lanson Ave., Dearborn, Mich.
 Klemm Automotive Products Co., 1718 N. Damen Ave., Chicago 47, Ill.
 Klenk's Aviation Snips, 107 E. 5th St., Wilmington, Del.
 Kling Bros. Engineering Works, 1320 N. Kostner Ave., Chicago 51, Ill.
 Kloppenberg Aluminum Foundry, 211 Marquette St., Davenport, Iowa.
 • Knights Co., James, Sandwich, Ill.
 Knowles Mushroom Ventilator Co., 583 Upper Mountain Ave., Upper Montclair, N. J.
 Kol-Master Corp., Oregon, Ill.
 Kool Air Engineering Co., San Bernardino, Calif.
 Koolvent Metal Awning Corp., of America, 324 Fourth Ave., Pittsburgh 22, Pa.
 Kopperman & Sons, Joseph, 316 New St., Philadelphia 6, Pa.
 Koppers Co., Inc., Tar Products Div., Koppers Bldg., Pittsburgh 19, Pa.
 Korfund Co., 48-01-A 32nd Pl., Long Island City 1, N. Y.
 Kortz Blower Mfg. Co., 117 Michigan St., N. W., Grand Rapids, Mich.
 • Ko-Z-Aire, Inc., Red Oak, Iowa.
 Kraissl Co., Inc., Terhune & Williams Ays., Hackensack, N. J.
 Kramer Bros. Foundry Co., 17 Dell St., Dayton 4, Ohio.
 Kramer Trenton Co., N. Olden & Breunig Ave., Trenton 5, N. J.
 Krauser-Boyd, Inc., 553 River Road, North Tonawanda, N. Y.
 Kresky Mfg. Co., Inc., Second & H Sts., Petaluma, Calif.
 • Kresno-Stamm Co., 345 Commercial Ave., Palisades Park, N. J.
 • Krueger Sentry Gauge Co., Green Bay, Wis.
 Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.

L

- Laclede-Christy Co., 310 S. Michigan Av., Chicago 4, Ill.
 Laclede Steel Co., Arcade Bldg., St. Louis 1, Mo.
 Laco Oil Burner Co., Inc., 238 Union St., Griswold, Iowa.
 LaCrosse Steel Roofing & Corrugating Co., 227 Jay St., LaCrosse, Wis.
 Lake Chemical Co., 3052 W. Carroll Ave., Chicago 12, Ill.
 Lakewood Engineering & Mfg. Co., 1756 W. Lake St., Chicago 12, Ill.
 Lamb Electric Co., 627 Lake St., Kent, Ohio.
 Lamb & Ritchie Co., 250 Albany St., Cambridge 39, Mass.
 Landis & Gyr, Inc., 104 Fifth Ave., New York 11, N. Y.
 Langenkamp Co., F. H., 229 E. South St., Indianapolis 25, Ind.
 Lapeer Mfg. Co., 1144 W. Baltimore, Detroit 2, Mich.
 Larkin Coils, Inc., 519 Memorial Dr., S. E., Atlanta 1, Ga.
 Larkin Lector Products Corp., Pine Bluff, Ark.
 LaSalle Oil Burner Co., 421 Westlake N., Seattle, Wash.
 Lasko Metal Products, Inc., 438 W. Gay St., West Chester, Pa.
 Lastik Products Co., Inc., 1106 Keenan Bldg., Pittsburgh 22, Pa.
 • Lau Blower Co., 2005 Home Ave., Dayton 7, Ohio.
 Lawson Mfg. Co., 300 N. Lexington Ave., Pittsburgh 8, Pa.
 Leas Co., H. Leslie, Monona, Iowa.
 Ledcote Products Co., 35-01 Vernon Blvd., Long Island City 1, N. Y.
 Lee Co., K. O., Congress at 1st, Aberdeen, S. Dak.
 Lee Engineering Co., 95 River St., Hoboken, N. J.
 Lee & Son Co., Thomas, 128-132 W. Second St., Cincinnati 2, Ohio.
 Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
 Leeson Air Conditioning Corp., 14631 Meyers Rd., Detroit 27, Mich.
 Lehigh Fan & Blower Co., Front & Linden Sts., Allentown, Pa.
 Lehigh Mfg. Co., P. O. Box 7418, Lancaster, Pa.
 Lehon Co., 4425 S. Oakley Ave., Chicago 9, Ill.
 • Leisur-Maid Mfg. Corp., 338 Wealthy St., S. W., Grand Rapids 3, Mich.
 Leisurehouse, Inc., 110 N. Lorraine, Wichita, Kans.
 Lenk Mfg. Co., 30-38 Cunningham St., Boston 15, Mass.
 Leland Electric Co., Inc., 1501 Webster St., Dayton 4, Ohio.
 Lennox Furnace Co., 200 S. 12th Av., Marshalltown, Iowa; 1705 Olentangy River Rd., Columbus, Ohio; 400 N. Midler Av.,

- Syracuse, N. Y.
 Leslie Mfg. Co., P. O. Box 7042, Dallas, Texas.
 Leslie Welding Co., 2943 Carroll Ave., Chicago 12, Ill.
 • Lewow, David, 308 W. 20th St., New York 11, N. Y.
 Lewellen Mfg. Co., Columbus, Ind.
 Lewin-Mathes Co., Lewin Metals Div., 12th & Chateau Sts., St. Louis 2, Mo.
 LeWinter Appliance Co., 2201 E. 7th St., Los Angeles 23, Calif.
 Lewia Laboratories, Inc., Paul, 4253 N. Port Washington Rd., Milwaukee 12, Wis.
 Lexington Supply Co., 4815 Lexington Ave., Cleveland 3, Ohio.
 L'Honmedieu & Sons Co., Chas. F., 4521 Ogden Ave., Chicago 23, Ill.
 Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.
 Libert Machine Co., 324 N. Roosevelt St., Green Bay, Wis.
 • Liberty Combustion Corp., 701 S. Salina St., Syracuse, N. Y.
 Lientz Co., B. P., 210 W. 8th St., Kansas City, Mo.
 Lignum-Vitae Products Corp., 96 Boyd Ave., Jersey City, N. J.
 • Lima Register Co., 651 N. Baxter St., Lima, Ohio.
 Lincoln Electric Co., 12818 Coit Rd., Cleveland 1, Ohio.
 Lincoln Machine Co., Livermore Falls, Maine.
 Linde Air Products Co., 30 E. 42nd St., New York 17, N. Y.
 Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill.
 Link-Belt Co., 2410 W. 18th St., Chicago 8, Ill.
 Liquid Carbonic Corp., Industrial Gas Div., 3100 S. Kedzie Av., Chicago 23, Ill.
 Liquidometer Corp., Skillman Av., 36th and 37th Sts., Long Island City 1, N. Y.
 Lisbon Hoist and Crane Co., Div. Wright File Co., Lisbon, Ohio.
 Litman, Morris, 39 Cliftwood St., Springfield, Mass.
 Little Burner Co., Inc., H. C., Woodland Ave. & Dubose St., San Rafael, Calif.
 Littleford Bros., Inc., 453 E. Pearl St., Cincinnati 2, Ohio.
 • Little Giant Vaporizer Co., 3101 Classen Blvd., Oklahoma City 6, Okla.
 Little Janitor Furnace Clock Co., 621 Broadway, New York, N. Y.
 • Livingston, Inc., Kalamazoo Av., Marshall, Mich.
 Lorke Stove Co., 114 W. 11th St., Kansas City 6, Mo.
 • Lockformer Co., 4615 Roosevelt Rd., Chicago 50, Ill.
 Loneragan Mfg. Co., 704 Plastic Road, Albion, Mich.
 Lord Mfg. Co., Erie, Pa.
 Los Angeles Gas Appliance Co., Inc., 3816 Medford St., Los Angeles 33, Calif.
 Los Angeles Sheet Metal Mfg. Co., Inc., 901 E. Ninth St., Los Angeles 21, Calif.
 Loudon Machinery Co., Fairfield, Iowa.
 Lovejoy Flexible Coupling Co., 3016 Lake St., Chicago 44, Ill.
 Lovekin Water Heater Co., 21-43 Laurel St., Philadelphia 23, Pa.
 Lucas & Co., Inc., John, 322 Race St., Philadelphia, Pa.
 Ludowici-Cladon Co., 104 S. Michigan Ave., Chicago 3, Ill.
 Lufkin Rule Co., Saginaw, Mich.
 Lukens Metal Co., Thos. F., Hedley & Bath Sts., Philadelphia 37, Pa.
 Lukens Steel Co., 308 S. First Ave., Coatesville, Pa.
 Lumm Co., A. H., 2512 Albion St., Toledo 6, Ohio.
 Lundt, Inc., Ernest C., Route 6, P. O. Box 216, Little Falls, N. J.
 Lundy Mfg. Corp., 27-27 Jackson Ave., Long Island City 1, N. Y.
 Luty Furnace Mfg. Co., 8747 Lyndon Ave., Detroit 21, Mich.
 Lyman Co., H. B., Southampton, Hampshire Co., Mass.
 Lynch Corp., 3600 Summit St., Toledo 1, Ohio.
 Lynn Products Co., 17 Willow St., Lynn, Mass.
 Lyon, Conklin & Co., Inc., Race & McComas St., Baltimore 30, Md.
 Lyon Metal Products, Inc., 740 Madison Av., Aurora, Ill.

M

- MB Mfg. Co., Inc., 1060 State St., New Haven 11, Conn.
 McCabe Powers Auto Body Co., 5900 N. Broadway, St. Louis, Mo.
 McCollum Hoist & Mfg. Co., 721 Rogers St., Downers Grove, Ill.
 McCord Corp., 2587 E. Grand Blvd., Detroit 11, Mich.
 McCorkle Co., D. H., Sixth & Bancroft Way, Berkeley 2, Calif.
 McDaniel Mfg. Co., Inc., 1012 Powhattan St., Dallas 2, Texas.
 McDonald Mfg. Co., A. Y., 12th & Pine Sts., Dubuque, Iowa.
 McDonnell & Miller, Inc., 3500 N. Spaulding Av., Chicago 18, Ill.
 McGraw Electric Co., 5201 W. 65th St., Chicago 38, Ill.
 McKay Co., 1005 Liberty Ave., Pittsburgh 22, Pa.
 McKee Air Conditioning Co., 3861 Freemont Av., N., Minneapolis 12, Minn.
 • McLarty Systems, 2600 Dickman, Battle Creek, Mich.
 McLeod & Henry Co., Inc., 357 First St., Troy, N. Y.
 McPherson Furnace & Supply Co., 1805 N. E. 2nd Av., Port-

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- land 12, Ore.
- McQuay, Inc., 1600 Broadway, N. E., Minneapolis 13, Minn.
- Machine Rebuilding Co., 2738 Chene St., Detroit 7, Mich.
- Machinery Liquidating Co., 2663 Michigan Ave., Detroit 16, Mich.
- Madden Brass Products Co., 1111 N. Franklin St., Chicago 10, Ill.
- Made-Rite Co., Inc., 10th & Monroe St., Newport, Ky.
- Magic Servant Products Co., 15211 Joy Rd., Detroit 28, Mich.
- MaGirl Foundry & Furnace Co., 415 E. Oakland Ave., Bloomington, Ill.
- Mahl Mfg. Co., 3081 Slauson Ave., Huntington Park, Calif.
- Maid-O-Mist Inc., 3217 N. Pulaski Rd., Chicago 41, Ill.
- Majestic Co., 733 Erie St., Huntington, Ind.
- Mall Tool Co., 7740 South Chicago Ave., Chicago 19, Ill.
- Malleable Iron Fittings Co., Lock Box 231, Branford, Conn.
- Mallory & Co., Inc., P. R., Ray F. Storrow Bldg., Indianapolis, Ind.
- Manhattan Perforated Metal Co., Inc., 43-17 37th St., Long Island City 1, N. Y.
- Manheim Mfg. and Belting Co., Manheim, Pa.
- Manning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2, Conn.
- Manufacturer's Fin Coil Co., 2505 S. Pulaski Rd., Chicago 23, Ill.
- Maple City Furnace Co., 605 S. Main St., Moonmouth, Ill.
- Maplewood Machinery Co., 2634 Fullerton Ave., Chicago 47, Ill.
- Marathon Electric Mfg. Corp., Cherry & Randolph Sts., Wausau, Wis.
- Marble-Card Electric Co., Gladstone, Mich.
- Marine Electrolysis Eliminator Co., 617 Dearborn St., Seattle, Wash.
- Marley Co., Inc., Fairfax & Marley Rds., Kansas City 15, Kans.
- Mario Coil Co., 6135 Manchester Av., St. Louis 10, Mo.
- Marquette Mfg. Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.
- Marsh Corp., Jas. P., Skokie, Ill.
- Marsh Lumber Co., Inc., 535-611 Tuscarawas Ave., Dover, Ohio.
- Marshall Furnace Co., Dobbins & Hanovers Sts., Marshall, Mich.
- Marshalltown Mfg. Co., 901 E. Nevada St., Marshalltown, Iowa.
- Martens & Stormoen Co., 15 Hathaway St., Boston 10, Mass.
- Martin Fan & Blower Co., 4634 W. 21st Place, Chicago 50, Ill.
- Martin Co., Inc., J. O., 647 Minna St., San Francisco 3, Calif.
- Martin Stamping & Stove Co., Huntsville, Ala.
- Martocello & Co., Jos. A., 229 N. 13th St., Philadelphia 7, Pa.
- Marvin Mfg. Co., 3071 E. 12th St., Los Angeles 23, Calif.
- Mason Machine Co., Inc., 817 E. King St., York, Pa.
- Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
- Master Electric Co., 126 Davis Av., Dayton 1, Ohio.
- Master Products Co., Inc., 7000 S. Wentworth Av., Chicago 21, Ill.
- Matt Coil-Less Burner Co., 4015 W. Lake St., Chicago 24, Ill.
- Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
- Mauer Engineering 2525 Colfax St., Evanston, Ill.
- Maurey Mfg. Corp., 2915 S. Wabash Av., Chicago 16, Ill.
- Maxant Button & Supply Co., 117 S. Morgan St., Chicago 7, Ill.
- Maxwell, Inc., 1432 S. Logan St., Denver 10, Colo.
- May-Fiebeger Co., S. 21st St., Newark, Ohio.
- Mayflower Air Conditioners, Inc., Duluth Av. & E. Seventh St., St. Paul 6, Minn.
- Mayne Products Co., 324 Harries Bldg., Dayton 2, Ohio.
- May Oil Burner Div., Gerotter May Corp., Maryland Av. & Oliver St., Baltimore 3, Md.
- Maysteel Products, Inc., 740 N. Plankinton Ave., Milwaukee 3, Wis.
- Maze Co., W. H., Peru, Ill.
- Mechanical Products Co., 1723 First Ave., S. Seattle 4, Wash.
- Mehl Machinery, 1101 Austin St., Houston 1, Texas.
- Meier Electric & Machine Co., Inc., 3525 E. Washington St., Indianapolis 7, Ind.
- Mel-Gauge Co., P. O. Box 17, Station A, New Haven, Conn.
- Mclish & Murray Co., 1715 Carroll Av., Chicago 12, Ill.
- Merchandising and Mfg. Associates, Inc., Wabank Rd., Box 411, Lancaster, Pa.
- Mercoid Corp., 4201 Belmont Av., Chicago 41, Ill.
- Meriam Instrument Co., 10920 Madison Ave., Cleveland 2, Ohio.
- Met Sales & Mfg. Co., 1217 N. Main St., Rockford, Ill.
- Metal Carrier Corp., 1750 Alpine Ave., N. W., Grand Rapids 4, Mich.
- Metal Service Co., 100 Stuart St., Green Bay, Wis.
- Metal & Thermit Corp., 120 Broadway, New York 5, N. Y.
- Metalweld, Inc., 26th & Hunting Park Ave., Philadelphia 29, Pa.
- Metromatic Mfg. Co., 21 Henderson St., Everett 49, Mass.
- Metropolitan Refining Co., Inc., 50-23 23rd St., Long Island City 1, N. Y.
- Metzner Stove Repair Co., 515 Wyandotte, Kansas City 6, Mo.
- Meyer & Bro. Co., F., 308 S. Commercial St., Peoria, Ill.
- Meyer Furnace Co., 1300 S. Washington St., Peoria 1, Ill.
- Meyer Mfg. Co., 2536 Fourteenth St., Detroit 16, Mich.
- Meyer Sheet Metal Machinery Co., 1928-30 Santa Fe Ave., Los Angeles 21, Calif.
- Michigan Steel Tube Products Co., Holbrook & Buffalo Aves., Detroit 12, Mich.
- Michigan Tank & Furnace Corp., 14247 Tireman Ave., Dearborn, Mich.
- Micro Products Co., 20 N. Wacker Dr., Chicago 6, Ill.
- Midco Register Corp., 1059 Grand Av., St. Paul 5, Minn.
- Mid-Continent Metal Products Co., 1960 Clybourn Av., Chicago 14, Ill.
- Midland Paint & Varnish Co., 3801 E. 91st St., Cleveland 5, Ohio.
- Mid-States Welder Mfg. Co., 6025 S. Ashland Ave., Chicago 36, Ill.
- Midwest Automatic Control Co., 510 Third St., Des Moines 9, Iowa.
- Midwest Heater Co., 1114 Howard St., Omaha 8, Nebr.
- Miller Co., Heating Products Div., Meriden, Conn.
- Miller & Doing, 89 Adams St., Brooklyn 1, N. Y.
- Miller Electric Mfg. Co., Inc., 718 S. Bounds St., Appleton, Wis.
- Miller Floor Furnace Co., 741 E. 14th St., Oakland, Calif.
- Miller-Harris Instrument Co., 2726 Fourth Av. S., Minneapolis 8, Minn.
- Miller Products Co., Box 156, Lansing 9, Mich.
- Miller-Special Gas Heating Co., Div. Keene Electrical Machinery Co., 549 W. Washington Blvd., Chicago 6, Ill.
- Millers Falls Co., 57 Wells St., Greenfield, Mass.
- Mills Novelty Co., 4110 W. Fullerton Av., Chicago, Ill.
- Milton Equipment Co., 402 Race St., Philadelphia 6, Pa.
- Milwaukee Brush Mfg. Co., 2236 N. 30th St., Milwaukee, Wis.
- Milwaukee Gas Specialty Co., P. O. Box 461, Milwaukee 1, Wis.
- Minneapolis-Honeywell Regulator Co., 2726 Fourth Av. S., Minneapolis 8, Minn.
- Minnesota Mining & Mfg. Co., 900 Fauquier Av., St. Paul 6, Minn.
- Min-Kota Foundry & Mfg. Co., P. O. Box 822, Fargo, N. Dak.
- Minster Machine Co., 270 W. 5th St., Minster, Ohio.
- Misener Mfg. Co., Inc., 202-8 Walton St., Syracuse 2, N. Y.
- Mitchell & Co., Inc., W. K., 29th & Ellsworth, Philadelphia 46, Pa.
- Modern Controls Corp., 7620 Kercheval Av., Detroit 14, Mich.
- Modern Die & Machine Co., 166 Pleasant St., Boston 25, Mass.
- Modern Engineering Co., 3411 Pine Blvd., St. Louis 3, Mo.
- Modern Materials Co., 120 W. Adams St., Chicago 3, Ill.
- Modine Mfg. Co., 1500 DeKoven Ave., Racine, Wis.
- Moeller Instrument Co., 132ud St. & 89th Av., Richmond Hill 18, N. Y.
- Moesch-Edwards Corrugating Co., Inc., P. O. Box 1115, Cincinnati, Ohio.
- Mohawk Metal Products Co., Inc., Frankfort, N. Y.
- Molloy Machine Corp., 3445 N. Western Ave., Chicago, Ill.
- Monad Products Co., 6550 Hartwell, Dearborn, Mich.
- Monarch Alloys, 503 N. Chestnut St., Ravenna, Ohio.
- Monarch Heating Co., 4661 Alger St., Los Angeles 39, Calif.
- Monarch Mfg. Works, Inc., 2501 E. Ontario St., Philadelphia 34, Pa.
- Moncrief Furnace Co., P. O. Box 1673, Atlanta 1, Ga.
- Moncrief Furnace & Mfg. Co., Inc., 3903 Main St., Dallas 1, Texas.
- Monitor Controller Co., 51-55 Hayward St., Boston 84, Mass.
- Monogram Products Co., 731 N. 35th St., Philadelphia 4, Pa.
- Montag Stove & Furnace Works, 2011 N. Columbia Blvd., Portland 17, Ore.
- Montgomery Bros., 1122 Howard St., San Francisco 3, Calif.
- Moore Co., 806 S. Missouri Ave., Marceline, Mo.
- Moore Div., Conlon-Moore Corp., 105 E. Benton St., Joliet, Ill.
- Moore Equipment Co., 5827 S. 52nd St., Lincoln 6, Nebr.
- Morey, Dan, 814-816 S. Robertson Blvd., Los Angeles 35, Calif.
- Morrison Products, Inc., 16816 Waterloo Rd., Cleveland 10, Ohio.
- Morrison Railway Supply Corp., P. O. Box 185, Station F, Buffalo, N. Y.
- Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.
- Morse-Smith-Morse, Inc., 165 Dexter Ave., Watertown 72, Mass.
- Mortell Co., J. W., Hobbie Av. & Big Four R.R., Kankakee, Ill.
- Moser & Son Mfg. Co., 227 E. Washington St., Bluffton, Ind.
- Mountain States Equipment Co., 1238 Speer Blvd., Denver 4, Colo.
- Mt. Hawley Mfg. Co., Mt. Hawley Airport, Peoria 4, Ill.
- Mt. Vernon Furnace & Mfg. Co., P. O. Box 213, Mt. Vernon, Ill.
- Muckle Mfg. Co., Owatonna, Minn.
- Mueller Brass Co., 1925 Lapeer Av., Port Huron, Mich.
- Mueller Co., 512 W. Cerro Gordo St., Decatur, Ill.
- Mueller Furnace Co., L. J., 2005 W. Oklahoma Av., Milwaukee 13, Wis.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Mulkey Co., J. F. W. 8 Mile & Telegraph Rds., Detroit 19, Mich.
 Multi-Therm Mfg. Co., Inc., 11637 Linwood, Detroit 6, Mich.
 Muncie Burner Mfg. Co., 27293 Eureka Rd., Romulus, Mich.
 Muncie Gear Works, Inc., 700 N. Wysox, Muncie, Ind.
 Mundet Cork Corp., 7101 Tonnelle Ave., North Bergen, N. J.
 Mundt & Sons, Charles, 53 Fairmont Ave., Jersey City 4, N. J.
 Munn & Steel, Inc., 130 Lister Ave., Newark 5, N. J.
 Munton Mfg. Co., 9400 Belmont Ave., Franklin Park, Ill.
 Murray Co. of Texas, Inc., 3200 Canton St., Dallas 1, Texas.
 Murray Mfg. Co., D. J., 1002-24 Third St., Wausau, Wis.
 Mustee Heater Co., 3409 Superior Ave., Cleveland 14, Ohio.
 Mutual Liquid Gas & Equipment Co., 3600 W. Imperial Highway, Inglewood, Calif.
 Myers & Bros. Co., F. E., Ashland, Ohio.
 Myers Electric Co., Inc., 209 First Ave., Pittsburgh 22, Pa.

N

Nat Corp., 2710 McGee Trafficway, Kansas City 8, Mo.
 National Air Conditioning Inc., 221 Central Ave., Johnstown, Pa.
 National Airoil Burner Co., Inc., 1284 E. Sedgley Ave., Philadelphia 34, Pa.
 National Appliance Co., 4814 W. Vernor Hwy., Detroit 9, Mich.
 National Appliances, Inc., Thomas Blvd. & N. Lexington Ave., Pittsburgh 8, Pa.
 National Carbon Co., Inc., 30 E. 42nd St., New York 17, N. Y.
 National Cylinder Gas Co., 840 N. Michigan Ave., Chicago 11, Ill.
 National Electric Welding Machines Co., 1846 N. Trumbull St., Bay City, Mich.
 National Engineering & Mfg. Co., 319 Wyandotte, Kansas City 6, Mo.
 National Engineering Products, Inc., Commerce & Savings Bldg., Washington, D. C.
 National Foundry & Furnace Co., Station "B," Dayton 7, Ohio.
 National Gas Equipment Co., Inc., P. O. Box 443, Terrell, Texas.
 National Gypsum Co., 325 Delaware Ave., Buffalo 2, N. Y.
 National Heater Co., 2182 Cleora Ave., St. Paul 4, Minn.
 National Lead Co., 111 Broadway, New York 6, N. Y.
 National Lock Co., Inc., 1902 Seventh St., Rockford, Ill.
 National Machine Tool Co., 1536 Clark St., Racine, Wis.
 National Mfg. Corp., 151 Fillmore Ave., Tonawanda, N. Y.
 National Metal Fabricators, 2136 S. Sawyer Ave., Chicago 23, Ill.
 National Oil Burner Co., 614 Bergen St., Brooklyn 17, N. Y.
 National Pipe Bending Co., 122 River St., New Haven 13, Conn.
 National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio.
 National Sheet Metal Co., 1617 Water St., Peru, Ill.
 National Steam Pump Co., 701 W. Johnson St., Upper Sandusky, Ohio.
 National Stoker Co., Inc., 2820 Locust St., St. Louis 3, Mo.
 National Super Service Co., Inc., 1944 N. 13th St., Toledo 2, Ohio.
 National Tube Co., Frick Building, Pittsburgh 30, Pa.
 Nebel Mfg. Co., P. O. Box 3942, Shaker Sq. Station, Cleveland 20, Ohio.
 Neilson Chemical Co., 6564 Benson St., Detroit 7, Mich.
 Nelpin Mfg. Co., 45-17 Davis St., Long Island City 1, N. Y.
 Nelson Bros. & Strom Co., 1620 Racine St., Racine, Wis.
 Nelson Div., Herman, American Air Filter Co., Inc., 1824 Third Ave., Moline, Ill.
 Nelson Specialty Welding Equipment Corp., Dept. 5, 440 Peralta Ave., San Leandro, Calif.
 Nelson Stud Welding Div., Morton Gregory Corp., Toledo Ave. & E. 28th St., Lorain, Ohio.
 Nesbitt, Inc., John J. State Rd. & Rhawn St., Philadelphia 36, Pa.
 Nevinger Mfg. Co., Inc., Greenville, Ill.
 New Albany Machine Mfg. Co., E. 10th & Water Sts., New Albany, Ind.
 Newark Ladder & Bracket Co., Inc., Walnut & Central Ave., Clark (Rahway), N. J.
 Newark Transformer Co., Linden & Park Aves., Linden, N. J.
 Newcomb-Detroit Co., 5741 Russell St., Detroit 11, Mich.
 New Delphos Mfg. Co., 102 S. Pierce St., Delphos, Ohio.
 New England Carbide Tool Co., 60 Brookline St., Cambridge 39, Mass.
 New Holland Metals Co., Div. New Holland Machine Co., Mountville, Pa.
 Newell & Sons, Irwin, Pa.
 New Jersey Zinc Co., 160 Front St., New York 7, N. Y.
 New Monarch Machine & Stamping Co., 406 S. W. 9th St., Des Moines 9, Iowa.
 New Plastic Corp., 1041 N. Orange Dr., Hollywood 38, Calif.
 Newport Steel Corp., Newport, Pa.
 Newport Rolling Mill Co., Div. Andrews Steel Co., 9th &

Lowell Sts., Newport, Ky.
 New York Blower Co., 3155 Shields Ave., Chicago 16, Ill.
 Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y.
 Niagara Machine & Tool Works, 637-697 Northland Ave., Buffalo 11, N. Y.
 Niagara Motors Corp., Dunkirk, N. Y.
 Nichols Wire & Aluminum Co., Davenport, Iowa.
 Niles Rolling Mill Co., Niles, Ohio.
 Noble & Stanton, 1032 Broadway, Bedford, Ohio.
 No-No Specialty Co., Quincy Ave. at 69th St., Cleveland 4, Ohio.
 Norge Heat Div., Borg-Warner Corp., 672 E. Woodbridge St., Detroit 26, Mich.
 Norma-Hoffmann Bearings Corp., Stamford, Conn.
 Norman Products Co., Inc., 1150 Chesapeake Ave., Columbus 12, Ohio.
 Norristown Magnesia & Asbestos Co., Washington St. below Ford St., Norristown, Pa.
 North American Mogul Products Co., Standard Building, Cleveland 13, Ohio.
 North Bangor Slate Co., Bangor, Pa.
 Northern Blower Co., 6409 Barberton Ave., Cleveland 2, Ohio.
 Northern Indiana Brass Co., 935 Plum St., Elkhart, Ind.
 Northern Steel & Stoker Corp., 3100 Prospect Rd., Peoria 4, Ill.
 Northwest Foundry & Furnace Co., 2345 S. E. Gladstone St., Portland 2, Ore.
 Northwest Heating, Inc., 1944 N. Lombard, Portland 3, Ore.
 Northwest Lead Co., 2700 16th Ave., S. W., Seattle 4, Wash.
 Northwest Metal Products, Inc., 35 Spokane St., Seattle 4, Wash.
 Northwestern Stove Repair Co., 662 W. Roosevelt Rd., Chicago 7, Ill.
 Nortmann-Duffke Co., 2740 S. 32nd St., Milwaukee 46, Wis.
 Norwalk Air Conditioning Corp., 138 Water St., South Norwalk, Conn.
 Norwood Filtration Co., 380 Dwight St., Holyoke, Mass.
 Nugent Furnaces, Thos., 223 E. 80th St., New York 21, N. Y.
 NuSteel Co., 1714 S. Ashland Ave., Chicago 8, Ill.
 Nu-Way Corp., 2416 Fourth St., Rock Island, Ill.

O

Oakite Products, Inc., 22 Thames St., New York 6, N. Y.
 Oakland Foundry Co., Florida and A Sts., Belleville, Ill.
 Odyke, Inc., Benjamin P., 447 N. Eighth St., Philadelphia 23, Pa.
 O'Brien Corp., 101 N. Johnson St., South Bend 21, Ind.
 Octagon Ventilator Co., 3828-30 S. Oakley Ave., Chicago 36, Ill.
 Ohio Electric Mfg. Co., 3910 Maurice Ave., Cleveland 4, Ohio.
 Ohio Foundry & Mfg. Co., Penn R. R. & Slack St., Steubenville, Ohio.
 Ohio Paper Co., Miamisburg, Ohio.
 Ohio Products Co., 16113 Munn Road, Cleveland 11, Ohio.
 Ohio Stove Co., Dept. 351, Portsmouth, Ohio.
 Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., 300 Fourth Ave., Evansville 2, Ind.
 Ohio Wire Products Co., 217 N. Tuscarawas Ave., Dover, Ohio.
 Geo. H. Ohmer Co., Box 34, Sta. D., Dayton 10, Ohio.
 Ohmlac Paint & Refining Co., 6550 S. Central Ave., Chicago 38, Ill.
 Oil Equipment Laboratories, Inc., 456 Bridge St., Elizabeth, N. J.
 Oil Equipment Mfg. Corp., 75 Brewster St., New Haven 6, Conn.
 Oil Heat Institute of America, 6 East 39th St., New York 16, N. Y.
 O'Keefe & Merritt Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
 Oliver-Appton Co., 260 Broadway, Denver 9, Colo.
 Olmstead & Co., Chas. M., 14926 Mack Ave., Detroit 24, Mich.
 Olsen Mfg. Co., The C. A., Filbert St., Elyria, Ohio.
 Olson & Co., Arthur A., Broad and Court Sts., Canfield, Ohio.
 Omaha Stove Repair Works, Inc., 1206 Douglas St., Omaha 8, Nebr.
 O'Neil-Irwin Mfg. Co., 800 Jefferson Ave., Lake City, Minn.
 Oran Co., 2232 S. Third St., Columbus 7, Ohio.
 Original Metal Forming Machine Co., P. O. Box 214, Seattle 11, Wash.
 Ormsby-Outerman Co., 3631 Cass Ave., St. Louis 13, Mo.
 Osborn Mfg. Co., 5401 Hamilton Ave., Cleveland 14, Ohio.
 Overhead Heaters, Inc., 1334 Book Bldg., Detroit 26, Mich.
 Overly Mfg. Co., Washington Ave., Greensburg, Pa.
 Owens-Corning Fiberglas Corp., 1930 Nicholas Bldg., Toledo 1, Ohio.

P

Pabco Products Inc., 475 Brannan St., San Francisco 19, Calif.
 Pacific Coast Heater Corp., 330 S. Del Mar Av., San Gabriel,

• Advertisements in this issue. See Index to Advertisers, page 104-D.

- Calif.
Pacific Gas Heating Co., 2948 Twentieth St., San Francisco 10, Calif.
Pacific Industrial Mfg. Co., 848 49th Ave., Oakland 1, Calif.
Pacific Lumber Co., 100 Bush St., San Francisco 4, Calif.
Pacific Mfg. Corp., 7500 Stanton Ave., Cleveland 4, Ohio.
Packard Electric Div., General Motors Corp., Warren, Ohio.
Packham Crimper Co., Oak St. & N. Y. C. Depot, Mechanicsburgh, Ohio.
Packless Metal Products Corp., 31 Winthrop Av., New Rochelle, N. Y.
Page Steel & Wire, Div. American Chain & Cable Co., Inc., Monessen, Pa.
Paine Co., 2951 W. Carroll Av., Chicago 12, Ill.
Pains Fireworks Display Co., Inc., 350 5th Ave., New York 1, N. Y.
Palmer Mfg. Corp., 705 W. Jefferson St., Phoenix, Ariz.
Palmer Thermometers, Inc., 2501 Norwood Av., Norwood, Cincinnati 12, Ohio.
Palo-Myers, Inc., 81-83 Reade St., New York 7, N. Y.
Pangborn Corp., Pangborn Blvd., Hagerstown, Md.
Paragon Electric Co., 1600 Twelfth St., Two Rivers, Wis.
Paragon Oil Burner Corp., 75 Bridgewater St., Brooklyn 22, N. Y.
Paramount Supply Co., 2727 N. 48th St., Lincoln 4, Nebr.
Park City Cornice Works, Inc., 729 Union Av., Bridgeport 7, Conn.
Parker Appliance Co., 17325 Euclid Av., Cleveland 12, Ohio.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Parker Rust-Proof Co., 2177 E. Milwaukee Av., Detroit 11, Mich.
Patent Novelty Co., Fulton, Ill.
Patrol Valve Co., 2510 Superior Ave., N. E., Cleveland 14, Ohio.
• Patten Co., J. V., 500 DeKalb Av., Sycamore, Ill.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Patterson-Sargent Co., St. Clair & 38th St., Cleveland 14, Ohio.
Payne Furnace Div., Affiliated Gas Equipment, Inc., 801 Royal Oak Ave., Monrovia, Calif.
Peacard Co. M. A., 2038 Washington St., Roxbury Sta., Boston 19, Mass.
• Peck, Stow & Wilcox Co., Center St., Southington, Conn.
Pecora Paint Co., 4th St. & Erie Av., Philadelphia 40, Pa.
Pedrick Tool & Machine Co., 3640 N. Lawrence St., Philadelphia 40, Pa.
Peer, Inc., 1440 Milton St., Benton Harbor, Mich.
• Peerless Electric Co., 1401 W. Market St., Warren, Ohio.
• Peerless Foundry Co., 1853 Ludlow Av., Indianapolis 7, Ind.
Peerless of America, Inc., 1501 N. Magnolia, Chicago 22, Ill.
Peerless Oil Burner Co., Inc., 3519 Bellefontaine Av., Kansas City 3, Mo.
Peerless Sales and Supply, 4318 Sheridan Blvd., Lincoln 6, Nebr.
Peninsular Stove Co., 2699 Gratiot Av., Detroit, Mich.
Penn Boiler & Burner Mfg. Corp., Fruitville Rd., Lancaster, Pa.
Penn Brass & Copper Co., Erie, Pa.
• Penn Electric Switch Co., Goshen, Ind.
• Penn Metal Co., Inc., 205 E. 42nd St., New York 17, N. Y.
Penn Supply & Metal Corp., 1831 N. Fifth St., Philadelphia 22, Pa.
Penn Tool Co., 124 E. Cumberland St., Philadelphia 23, Pa.
Penn Ventilating Co., Goodman above Allegheny Av., Philadelphia 40, Pa.
Pennsylvania Flexible Metallic Tubing Co., 72nd St. & Powers Lane, Philadelphia 42, Pa.
Pennsylvania Furnace & Iron Co., P. O. Box 269, Warren, Pa.
Pennsylvania Range Boiler Co., 24th & Ellsworth Sts., Philadelphia 46, Pa.
Pennsylvania Refining Co., Ohio Div., 2686 Lisbon Rd., Cleveland 4, Ohio.
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Philadelphia 7, Pa.
Pennsylvania Wire Glass Co., 1612 Market St., Philadelphia 3, Pa.
• Perfection Stove Co., 7609 Platt Av., Cleveland 4, Ohio.
• Perflex Corp., 500 W. Oklahoma Av., Milwaukee 7, Wis.
Perkinson & Brown, 412 N. Wolcott Av., Chicago 12, Ill.
Permutit Co., 350 W. 42nd St., New York 18, N. Y.
Pernot Corp., P. O. Box 368, Norwalk, Calif.
Perry Graf Co., Maywood, Ill.
Persson and Kellison, 4415 Airport Way, Seattle 8, Wash.
Peters-Dalton, Inc., 17900 Ryan Road, Detroit 12, Mich.
• Petersen Mfg. Co., DeWitt, Nebr.
Peterson Co., B. A., 300 W. Railroad, Dowagiac, Mich.
Petroleum Heat & Power Co., Stamford, Conn.
Petroleum Solvent Corp., 331 Madison Av., New York 17, N. Y.
Petrometer Corp., 1 Star Sq., Long Island City 1, N. Y.
Pfanzstiel Chemical Co., 104 Lakeview Av., Waukegan, Ill.
Pfening Co., Fred D., 1075 W. 3th Av., Columbus 12, Ohio.
Phelps Dodge Copper Products Corp., British American Tube Div., 40 Wall St., New York 3, N. Y.
Phelps Mfg. Co., 801 Thomas St., Little Rock, Ark.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Philadelphia Chain Block & Mfg. Co., Inc., Hancock & Norris Sts., Philadelphia, Pa.
Philadelphia Gear Works, Inc., Erie Av. & G St., Philadelphia 34, Pa.
• Philadelphia Rust Proof Co., 3324 Frankford Ave., Philadelphia, Pa.
Philadelphia Thermometer Co., 6th & Cayuga Sts., Philadelphia 40, Pa.
Philadelphia Tramrail Co., 3458 N. Weikel St., Philadelphia 34, Pa.
Phillips Cooling Tower Co., Inc., 220 Dupont St., Brooklyn 22, N. Y.
Phillips Drill Co., 4700 Fifth Av., Chicago 44, Ill.
Phillips & Buttorff Mfg. Co., 217 Third Av., N., Nashville, Tenn.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Pioneer Gen-E-Motor, 5841 W. Dickens, Chicago, Ill.
• Pioneer Tool Co., 1103 Wisconsin Av., Racine, Wis.
Pioneer Water Heater Corp., 3131 San Fernando Rd., Los Angeles 41, Calif.
Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa.
Pittsburgh Equitable Meter Div., Rockwell Mfg. Co., 400 N. Lexington Av., Pittsburgh 8, Pa.
Pittsburgh Furnace Parts Co., 109 Federal St., Pittsburgh, Pa.
Pittsburgh Lectoridryer Corp., P. O. Box 1766, Pittsburgh 30, Pa.
Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.
Pittsburgh Water Heater Co., P. O. Box 4452, Pittsburgh 3, Pa.
Pittston Stove Co., P. O. Box 279, Pittston, Pa.
Plant Rubber & Asbestos Works, Inc., 537 Brannan St., San Francisco 7, Calif.
Plastel Products Co., McAdam Ave., Washington, Pa.
Plasteron Wall Board Co., Philadelphia Av., Buffalo 7, N. Y.
Plastic Products Co., 6475 Georgia Av., Detroit 11, Mich.
Pleasantaire Corp., 730 Tower Bldg., Washington 5, D. C.
Plummer Spray Equipment Co., 700 Filmore St., Napoleon, Ohio.
Plymouth Industries, Inc., 1932 Harrison Av., Plymouth, Ind.
Pocahontas Fuel Co., Inc., Stoker Div., 340 E. 131st, Cleveland 8, Ohio.
Polaire Cooler Co., Inc., 141 E. Jackson St., Phoenix, Ariz.
Polo Pump Co., Polo, Ill.
Portable Electric Tools, Inc., 320 W. 83rd St., Chicago 20, Ill.
Portland Stove Foundry Co., 57 Kennebec St., Portland 2, Maine.
• Potomac Mfg. Co., 318 S. 10th St., Philadelphia 7, Pa.
• Potts-Farrington Co., 4250 Wissahickon Ave., Philadelphia 29, Pa.
Powder Power Tool Corp., 0719 S. W. Woods St., Portland 1, Ore.
Powers Regulator Co., 2720 Greenview Av., Chicago 14, Ill.
Pratt-Daniel Corp., East Port Chester, Conn.
Precision Thermometer & Instrument Co., 1482 Brandywine St., Philadelphia 30, Pa.
Precision Welder & Machine Co., 138 E. McMicken Av., Cincinnati 10, Ohio.
Preferred Utilities Mfg. Corp., 1860 Broadway, New York 23, N. Y.
Premier Burner Co., 8816 Harkness Rd., Cleveland 6, Ohio.
• Premier Furnace Co., Lock Box 150, Dowagiac, Mich.
Premier Metal Etching Co., 21-05 44th Av., Long Island City 1, N. Y.
Premier Stove Co., Belleville, Ill.
Premium Coal & Oil Co., 5830 Carthage Ave., Cincinnati 12, Ohio.
Presstite Engineering Co., 3900 Chouteau St., St. Louis 10, Mo.
Pressure Products Corp., 140 N. Dearborn, Chicago 2, Ill.
Progressive Welder Sales Co., 3070 E. Outer Dr., Detroit 34, Mich.
Proie & Coogan Heating Co., 6117 Broad St., Pittsburgh 6, Pa.
Propaire Mfg. Co., South Locust St., Genoa, Ill.
Protective Coatings, Inc., P. O. Box 3985, Strathmoor Station, Detroit 27, Mich.
Pryne & Co., Inc., 140 N. Towne Ave., Pomona, Calif.
Puhl & Hepper Mfg. Co., Inc., 6400 W. Florissant Av., St. Louis 20, Mo.
Pullen Stove & Furnace Repair Co., Geo. A., 1333 Lawrence St., Denver 2, Colo.
Pyle-National Co., Multi-Vent Div., 1367 W. 37th St., Chicago 9, Ill.
Pryott Foundry & Machine Co., 328 N. Sangamon St., Chicago 7, Ill.
Pyramid Mouldings, Inc., 5555 W. Armstrong Av., Chicago 30, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

Pyrolite Products Co., 1221-31 W. 74th St., Cleveland 2, Ohio.
Pyro-Jet Div. Riverside Steel Co., Wheeling, W. Va.

Q

- Quad Stove Co., 78 East First St., Columbus, Ohio.
- Queen Stove Works, Inc., Albert Lea, Minn.
- Quick Furnace & Supply Co., 215 Court Ave., Des Moines 9, Iowa.
- Quiet Automatic Burner Corp., 33-35 Bloomfield Ave., Newark 4, N. J.
- Quiet-Heat Mfg. Corp., 135 N. J. Railroad Ave., Newark 5, N. J.
- Quigley Co., Inc., 527 Fifth Ave., New York 17, N. Y.
- Quincy Stove Mfg. Co., 807 S. Front St., Quincy, Ill.

R

- RCS Tool Sales Corp., P. O. Box 1434, Joliet, Ill.
- R-D Sales Co., P. O. Box 912, Flint, Mich.
- R-S Products Corp., 4530 Germantown Ave., Philadelphia 44, Pa.
- Racine Tool & Machine Co., State St. & Carlisle Ave., Racine, Wis.
- Radiant Burners, Inc., 1185 Fagan St., Lombard, Ill.
- Radiant Utilities Corp., 8817 18th Ave., Brooklyn, N. Y.
- Radiation Furnace Corp., Benton Harbor, Mich.
- Radiator Specialty Co., 1722 Dowd Rd., Charlotte 1, N. C.
- Rajah Co., 53 Locust Ave., Bloomfield, N. J.
- Ramite Co., Div. S. Obermayer Co., 2363 W. 18th St., Chicago 8, Ill.
- Ran Corp., Vernon Press Div., P. O. Box 1747, Richmond, Calif.
- Randall Graphite Bearings, Inc., Greenlawn & Lake Sts., Lima, Ohio.
- Ransome Co., 4030 Hollis St., Emeryville 8, Calif.
- Rapid Heat Corp., 12317 Turner Ave., Detroit 4, Mich.
- Rapidising, Inc., P. O. Box 592, Glendale, Calif.
- Rattan Mfg. Co., P. O. Box 1745, New Haven 7, Conn.
- Rawplug Co., Inc., The, 271 Church St., New York 13, N. Y.
- Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
- Rayfield Co., C. L., 2010 S. Halsted St., Chicago 8, Ill.
- Ray Oil Burner Co., 401-499 Bernal Ave., San Francisco 12, Calif.
- Raytheon Mfg. Co., 100 Foundry St., Waltham 54, Mass.
- Reading Chain & Block Corp., 2100 Adams St., Reading, Pa.
- Redmond Co., A. G., Owosso, Mich.
- Red Spot Electric Co., 7405 S. Tacoma Way, Tacoma 9, Wash.
- Red Wing Oil Burner Co., Inc., 180 Spruce St., Chelsea 50, Mass.
- Reed Engineering Co., 1003 W. Fairview, P. O. Box 415, Carthage, Mo.
- Reed Unit-Fans, Inc., 1001 St. Charles Ave., New Orleans 8, La.
- Rees Blow Pipe Mfg. Co., 340 Seventh St., San Francisco 3, Calif.
- Reeves Steel & Mfg. Co., Lock Box 107, Dover, Ohio.
- Refractory & Insulation Corp., 120 Wall St., New York 5, N. Y.
- Refrigeration Appliances, Inc., 923 W. Lake St., Chicago 7, Ill.
- Refrigeration Economics Co., Inc., 1231 Tuscarawas St., E., Canton 2, Ohio.
- Rega Mfg. Co., 79 Mt. Hope Ave., Rochester 20, N. Y.
- Register & Grille Mfg. Co., Inc., 70 Berry St., Brooklyn 11, N. Y.
- Rehm, R., 112 208th St., St. Albans 11, N. Y.
- Reichert Float & Mfg. Co., 2238 Smead Ave., Toledo 6, Ohio.
- Reif-Rexoil, Inc., 37-41 Carroll St., Buffalo 3, N. Y.
- Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., Indianapolis 4, Ind.
- Reiner & Campbell Co., Inc., 19 Euclid Ave. at Lockwood St., Newark 5, N. J.
- Reinhard Bros. Co., 11 S. Ninth St., Minneapolis 2, Minn.
- Reliable Gas Products Co., 221 Third St., N. E., Cedar Rapids, Iowa.
- Reliance Automatic Lighting Co., 1929 Mead St., Racine, Wis.
- Reliance Electric & Engineering Co., 1058 Ivanhoe Rd., N. E., Cleveland 10, Ohio.
- Reliance Regulator Div., American Meter Co., Inc., 1000 Meridian Ave., Alhambra, Calif.
- Remington Air Conditioning Div., Remington Corp., Cortland, N. Y.
- Rempe Co., 340 N. Sacramento Ave., Chicago 12, Ill.
- Republic Heater Corp., 2231 Randolph St., Huntington Park, Calif.
- Republic Products Co., 7420 State Rd., Philadelphia, Pa.
- Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown 1, Ohio.
- Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
- Research Products Corp., 1015 E. Washington Ave., Madison 10, Wis.
- Revcor, 5201 N. Avondale Ave., Chicago 30, Ill.
- Revere Copper and Brass, Inc., 230 Park Ave., New York 17, N. Y.
- Revere Products, Inc., 9145 E. Forest Ave., Detroit 13, Mich.
- Rex Roto Corp., 14414 Dexter Blvd., Detroit 6, Mich.
- Rex Welder and Engineering Co., 1316 E. 10th St., Kansas City 6E, Mo.
- Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
- Reynolds Gas Regulator Co., 1416 Lincoln St., Anderson, Ind.
- Reynolds Mfg. Co., Springfield 2, Mo.
- Reynolds Metals Co., P. O. Box 2158, Louisville 1, Ky.
- Reznor Mfg. Co., Mercer, Pa.
- Rheem Mfg. Co., 570 Lexington Ave., New York 22, N. Y.
- Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford 6, Conn.
- Richards, J. Merrill, 25 Huntington Ave., Boston 16, Mass.
- Richards-Wilcox Mfg. Co., Third St., Aurora, Ill.
- Richfield Mfg. Corp., 33 Lawton St., New Rochelle, N. Y.
- Richmond Radiator Co., Affil. Reynolds Metals Co., 19 E. 47th St., New York 17, N. Y.
- Riester & Thesmacher Co., 1526 W. 23th St., Cleveland 13, Ohio.
- Riggin Metal Products, Box 267, Kankakee, Ill.
- Rigidized Metals Corp., 638 Ohio St., Buffalo 3, N. Y.
- Rinehart Inc., Richmond, Ind.
- Rival Strap Corp., 308 W. 20th St., New York 11, N. Y.
- Riverside Machinery Co., 4000 4th Ave. S., Minneapolis, Minn.
- Riverton Line & Stone Co., Inc., Riverton, Va.
- Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio.
- Roberts-Gordon Appliance Co., 44 Central Ave., Buffalo 6, N. Y.
- Roberts Mfg. Co., 2310 North St., Flint, Mich.
- Robertshaw Thermostat Div., Robertshaw-Falcon Controls Co., Youngwood, Pa.
- Robertson, F. L., 56 Rano St., Buffalo, N. Y.
- Robertson Co., H. H., 2400 Farmers Bank Bldg., Pittsburgh 22, Pa.
- Robinson Heaters, Inc., Columbus 1, Ohio.
- Robinson Insulation Co., P. O. Box 1419, Great Falls, Mont.
- Rochester Mfg. Co., Inc., 66 Rockwood St., Rochester 10, N. Y.
- Rockford Screw Products Co., 2501 Ninth St., Rockford, Ill.
- Rock Island Register Co., 2435 Fifth Ave., Rock Island, Ill.
- Rockwood Mfg. Co., Inc., 1801 English Ave., Indianapolis, Ind.
- Roebbling's Sons Co., John A., 640 S. Broad St., Trenton 2, N. J.
- Roesch Tool Co., 3461 Grand View Blvd., Los Angeles 34, Calif.
- Roessing Mfg. Co., 1616 Noble St., Sharpburg, Pittsburgh 15, Pa.
- Rome-Turney Radiator Co., Canal St., Rome, N. Y.
- Ronci Machine Co., Inc., F., 2 Atlantic Blvd., Centredale 11, R. I.
- Roper Corp., Geo. D., Blackhawk Park Av., Rockford, Ill.
- Roscoe Mfg. Co., 413 Fairview Ave., N., Seattle, Wash.
- Roschbraugh Co., W. W., 680 S. 17th St., Salem, Ore.
- Rosedale Foundry & Machine Co., Columbus & Preble Ave., N. S. Pittsburgh 12, Pa.
- Rose Mfg. Co., 1731 Arapahoe St., Denver 2, Colo.
- Ross Sprinkler Co., 34 Roberts St., Pasadena 3, Calif.
- Rossaul Co., 170 Fifth Ave., New York 10, N. Y.
- Rotary Concrete Drill Co., 650 S. Arroyo Parkway, Pasadena 2, Calif.
- Rotex Punch Co., 4726 E. 12th St., Oakland 1, Calif.
- Roto-Beam Div., Peerless of America, Inc., 333 N. Michigan Av., Chicago, Ill.
- Roto-Table Co., 2603 E. Third St., Dayton 3, Ohio.
- Rotor Corp., P. O. Box 42, Far Hills Bk., Dayton 9, Ohio.
- Rotor Tool Co., 17525 Euclid Ave., Cleveland 12, Ohio.
- Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
- Royal-Apex Mfg. Corp., 1389 Atlantic Av., Brooklyn 16, N. Y.
- Royal Heaters, Inc., 1024 Westminster Av., Alhambra, Calif.
- Royal Ventilator Co., 415 Locust St., Philadelphia 6, Pa.
- Royersford Foundry & Machine Co., 55 Main St., Royersford, Pa.
- Ruberoid Co., 500 Fifth Ave., New York 18, N. Y.
- Ruby Chemical Co., 74 McDowell St., Columbus 8, Ohio.
- Ruby Management Co., 620 Brookline Blvd., Pittsburgh 26, Pa.
- Rudy Mfg. Co., Dowagiac, Mich.
- Ruemelin Mfg. Co., 3860 N. Palmer St., Milwaukee 12, Wis.
- Ruggles-Klingemann Mfg. Co., 4 Foster Ct., Salem, Mass.
- Russell Co., F. C., 1100 Chester Ave., Cleveland 1, Ohio.
- Russell Mfg. Co., Inc., John M., Box 246, Naugatuck, Conn.
- Rust-Oleum Corp., Evanston, Ill.
- Rutland Fire Clay Co., 91 Curtis Av., Rutland, Vt.
- Ruud Mfg. Co., 2934 Smallman St., Pittsburgh 1, Pa.
- Rybolt Heater Co., 615 Miller St., Ashland, Ohio.
- Ryerson & Son, Inc., Joseph T., 2558 W. 16th St., Chicago 80, Ill.

• Advertisement in this issue. See Index to Advertisers, page 164-D.

- SKF Industries, Inc., Front St. and Erie Av., Philadelphia 32, Pa.
 S K F Steels, Inc., Graybar Building, New York 17, N. Y.
 S.O.S. Products Co., Inc., 282 Nassau Ave., Brooklyn 22, N. Y.
 St. Charles Mfg. Co., St. Charles, Ill.
 St. Clair Foundry Corp., Beech & Wilson Sts., Centralia, Ill.
 St. Clair Rubber Co., Marysville, Mich.
 St. Louis Furnace Mfg. Co., 2710 N. 25th St., St. Louis 6, Mo.
 St. Louis Tool Co., 6100 Prescott St., St. Louis 15, Mo.
 St. Paul Corrugating Co., South Wabasha & Water Sts., St. Paul 1, Minn.
 Salisbury Motors, Inc., 1201 E. Lexington St., Pomona, Calif.
 Sall Bros., 2330 Kiskwaukee Av., Rockford, Ill.
 Sall Mountain Co., 176 W. Adams St., Chicago 3, Ill.
 Samuel Stamping & Enameling Co., Manufacturers Rd., Chattanooga, Tenn.
 • San Angelo Foundry & Machine Co., Drawer 1587, San Angelo, Texas.
 Sandberg Mfg. Co., 3850 N. W. Yeon Av., Portland 10, Ore.
 Sanders, J. A., Box 123, Fulton, N. Y.
 Sangamo Electric Co., 1301 N. 11th St., Springfield, Ill.
 Sanit-Air Products Co., 802 Tower Bldg., South Bend 3, Ind.
 Sanitaire Co., 742 S. Hill St., Los Angeles 14, Calif.
 Santa Clara Metal Products Co., 751 Martin Av., Santa Clara, Calif.
 Sanvin Chemical Products Co., 1617 21st Av., Moline, Ill.
 Sarcotherm Controls, Inc., Empire State Bldg., New York 1, N. Y.
 Sauereisen Cements Co., Sharpsburg Station, Pittsburgh 15, Pa.
 Savage Co., W. J., 912 W. Clinch Av., Knoxville 1, Tenn.
 • Schaefer Brush Mfg. Co., 115-117 W. Walker, Milwaukee 4, Wis.
 Schaefer Electrical Products Co., 5604 Twelfth St., Detroit 8, Mich.
 Scheck, William, 353 Shaler Blvd., Ridgefield, N. J.
 Schecter Bros. Co., N. W. Cor. Hancock & Huntington Sts., Philadelphia 33, Pa.
 Schild Mfg. Co., 3264 N. 54 St., Milwaukee 16, Wis.
 Schill Mfg. Co., 302 Mansfield St., Crestline, Ohio.
 Schmidgall Mfg. Co., Inc., 307 Cass St., Peoria 2, Ill.
 Schmie Industries, Inc., 312-320 Piquette Av., Detroit 2, Mich.
 Schneible Co., Claude B., 2827 25th St., Detroit 32, Mich.
 Schoedinger, F. O., 322-358 Mt. Vernon Av., Columbus 16, Ohio.
 Schori Process Div. Ferro-Co. Corp., 8 Forty-third Rd., Long Island City 1, N. Y.
 • Schwab Furnace Co., 332 W. Florida St., Milwaukee 4, Wis.
 Schwab Safe Co., East Maine and Boulevard, Lafayette, Ind.
 Schwitzer-Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Scientia Tool Co., 101 Pine St., Dayton, Ohio.
 Scottdale Ozone Co., Crescent St., Scottdale, Pa.
 Scott-Newcomb, Inc., 1442 S. Boyle Ave., St. Louis 10, Mo.
 Scovill Mfg. Co., 99 Mill St., Waterbury 91, Conn.
 Scovill Mfg. Co., Waterville Div., Waterville, Conn.
 Scully Signal Co., 88 First St., Cambridge 41, Mass.
 Seamlex Co., 41-23 24th St., Long Island City 1, N. Y.
 Seco-Lite Mfg. Co., 4916 Easton Av., St. Louis 13, Mo.
 • Security Mfg. Co., 1630 Oakland Av., Kansas City 3, Mo.
 Selectrol Engineering Co., 2036 McDonald Av., Brooklyn 23, N. Y.
 • Sequoia Mfg. Co., 1000 Brittan Av., San Carlos, Calif.
 Serrel, Inc., Electric Refrigeration Div., 119 Morton Av., Evansville 20, Ind.
 • Sevenson Mfg. & Supply Co., 1034 W. Somers St., Milwaukee 3, Wis.
 Shafer Bearing Corp., P. O. Box 57, Downers Grove, Ill.
 Shakeproof, Inc., 2501 N. Keeler Av., Chicago 39, Ill.
 Shamblen Furnace Parts Co., 625 Hillsboro St., Pittsburgh 4, Pa.
 Sharon Steel Corp., Drawer 537, Sharon, Pa.
 Shedlov Oil Burners, Inc., 723 Third Av., S. Minneapolis 2, Minn.
 Sheet Metal Mfg. Co., Inc., 953 Myrtle Av., Brooklyn 6, N. Y.
 Sheet Metal Products Co., 320 S. Commercial St., Peoria 2, Ill.
 Sheet Metal Specialty Div., Follansbee Steel Corp., 3rd & Liberty Av., Pittsburgh, Pa.
 Sheldoll Slate Products Co., Inc., Middle Granville, N. Y.
 Shell Oil Co., 50 W. 50th St., New York 20, N. Y.
 Shepard Niles Crane & Hoist Corp., 410 Schuyler Av., Montour Falls, N. Y.
 Sherman & Co., 36-07 Prince St., Flushing, N. Y.
 Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio.
 Shott & Co., Ed., 3478 Reading Rd., Cincinnati 29, Ohio.
 Siebring Mfg. Co., P. O. Box 527, George, Iowa.
 • Siemon & Co., 3034 Main St., Kansas City 8, Mo.
 Sight Feed Generator Co., P. O. Box 38, West Alexandria, Ohio.
 Signal Electric Mfg. Co., P. O. Box 75, Menominee, Mich.
 Silent Glow Oil Burner Corp., 1477 Park St., Hartford 6, Conn.
 Silent Sioux Oil Burner Corp., Orange City, Iowa.
 Silvercote Products, Inc., 161 E. Erie St., Chicago 11, Ill.
 Silver Flame Industries, Inc., 2091 22nd St., Detroit 16, Mich.
 Simonds Saw & Steel Co., 470 Main St., Fitchburg, Mass.
 Simplex Mfg. Co., 200 N. Main St., Fond du Lac, Wis.
 Simplex Oil Heating Corp., 11 Park Place, New York 7, N. Y.
 Simpson Screen Co., 1030 E. 8th St., Oakland 6, Calif.
 Sioux Steel Co., Sioux Falls, S. Dak.
 Sipe & Co., James B., 118 Vanadium Rd., Pittsburgh 16, Pa.
 Sisalkraft Co., The, 205 W. Wacker Dr., Chicago 6, Ill.
 Skilbeck Mfg. Co., 7432 27th Av., Kenosha, Wis.
 Skilsaw, Inc., 5033 Elston Av., Chicago 30, Ill.
 Skinner Electric Valve Div., The Skinner Chuck Co., 40 Belden Ave., Norwalk, Conn.
 Skinner Heating & Ventilating Co., Div. St. Louis Blow Pipe & Heater Co., Inc., 1954 N. 9th St., St. Louis 6, Mo.
 • Skuttle Mfg. Co., 4099 Beaufait Ave., Detroit 7, Mich.
 Sleeth & Son, J. E., 910 N. Howard St., Spokane 11, Wash.
 Sly Mfg. Co., W. W., 4736 Train Av., Cleveland 2, Ohio.
 Small Lot Stamping Co., 1025 W. Blanche St., Linden, N. J.
 Small Motors, Inc., 2076 Elston Av., Chicago 14, Ill.
 Smith Co., J. B., 3327 B St., Philadelphia 34, Pa.
 Smith Corp., A. O., Milwaukee 1, Wis.; 1213 Norwood Ave., Toledo 7, Ohio.
 Smith Filter Corp., 1603 2nd, Moline, Ill.
 Smith Furnace Co., 216 S. Croton Ave., New Castle, Pa.
 Smith Heater Co., Peter, 10501 Haggerty, Dearborn, Mich.
 • Smith, R. E., 1806 Belvidere St., Waukegan, Ill.
 Smith & Son, Inc., Seymour, Box 591, Oakville, Conn.
 Smith Welding Equipment Corp., 2633 Fourth St., S. E., Minneapolis 14, Minn.
 Smooth-on Mfg. Co., 568-574 Communipaw Av., Jersey City 4, N. J.
 Snap-On Mfg. Co., 1028 Blue Island Av., Chicago, Ill.
 Snap-On Tools Corp., Kenosha, Wis.
 Socony Paint Products, Div. Socony-Vacuum Oil Co., Inc., 26 Broadway, New York 4, N. Y.
 Solvay Sales Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
 Somers, Inc., H. J., 6063 Wabash Av., Detroit 8, Mich.
 Sonneborn Sons, Inc., L., 80 Eighth Ave., New York 11, N. Y.
 Sonner Burner Co., P. O. Box 903, Winfield, Kans.
 Soss Mfg. Co., 21777 Hoover Rd., Detroit 13, Mich.
 South Bend Air Products, Inc., 322 E. Colfax, South Bend 22, Ind.
 Southbridge Roofing Co., Inc., Hartwell & Chapin Sts., Southbridge, Mass.
 South Chester Corp., Finance Bldg., Philadelphia 2, Pa.
 Souther Iron Co., E. E., 1952 Kienlen Av., St. Louis 20, Mo.
 Southern Air Conditioning Mfg. Co., 1309 Calhoun St., Fort Worth 2, Texas.
 Southern Aircraft Co., Garland, Dallas Co., Texas.
 Southern States Iron Roofing Co., Stiles Av. & Louisville Rd., Savannah, Ga.
 Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
 Southwestern Heater Corp., Cor. Hawkins & Lamor, Hillsboro, Texas.
 Southwest Mfg. Co., 1615 E. First St., Santa Ana, Calif.
 • South Wind Div., Stewart-Warner Corp., 1514 Drover St., Indianapolis 7, Ind.
 Spark Stove Co., Inc., 2619 E. 12th St., Oakland 1, Calif.
 Sparkler Mfg. Co., Mundelein, Ill.
 Spear Stove & Heater Co., James, 1000 Diamond St., Philadelphia 22, Pa.
 Speco, Inc., 7308 Associate Ave., Cleveland 9, Ohio.
 Speedway Mfg. Co., 1854 S. 52nd Ave., Cicero 30, Ill.
 Spencer Thermostat Div., Unit of Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 Spencer Turbine Co., 484 New Park Av., Hartford 6, Conn.
 Sperry & Co., D. R. Batavia, Ill.
 Sperti, Inc., Beech St. at Kenilworth Av., Norwood, Cincinnati 12, Ohio.
 Sponge Rubber Products Co., 280 Derby Place, Shelton, Conn.
 Sporlan Valve Co., 7525 Sussex Av., St. Louis 17, Mo.
 Spray Engineering Co., 114 Central St., Somerville 45, Mass.
 Spraying Systems Co., 3201 Randolph St., Bellwood, Ill.
 Spray-Flake Co., 2715 Irving Park Blvd., Chicago 18, Ill.
 Sprouse Co., Inc., V. E., 1804 22nd St., Columbus, Ind.
 Spun Steel Div., Automatic Steel Products, Inc., 1201 Camden Av., S. W., Canton 6, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Square D Co., 6060 Rivard St., Detroit 11, Mich.
 Standard Arcoil Corp., 21-23 Broad St., Newark 4, N. J.
 Standard Asbestos Mfg. Co., 860 W. Evergreen Ave., Chicago 22, Ill.
 Standard Electric Mfg. Co., Inc., West Berlin, N. J.
 Standard Fuel Engineering Co., 667 Post Av., S., Detroit 17, Mich.
 Standard Furnace Supply Co., 413-17 S. Tenth St., Omaha 8, Nebr.
 Standard Heater & Oil Equipment Co., 245 Cornelson Av., Jersey City 2, N. J.
 Standard Heating Equipment Co., 1406 E. Fourth St., Waterloo, Iowa.
 Standard Pressed Steel Co., Box 822, Jenkintown, Pa.
 Standard Remote Control Valve Co., 205 Pasadena Av., South Pasadena, Calif.
 Standard Rolling Mills, Inc., 196 Diamond St., Brooklyn 22, N. Y.
 • Standard Stamping & Perforating Co., 3137 W. 49th Pl., Chicago, Ill.
 Standard Ventilator Co., Lewisburg, Pa.
 Stanley Electric Tool Div., The Stanley Works, 480 Myrtle St., New Britain, Conn.
 Stanley Tools, New Britain, Conn.
 Star Electric Motor Co., 200 Bloomfield Av., Bloomfield, N. J.
 Star Expansion Bolt Co., 147 Cedar St., New York 6, N. Y.
 Star Heats & Co., 1012 Powhattan St., Dallas, Texas.
 Starke & Co., H. W., 5668 Geddes Rd., Ann Arbor, Mich.
 State Steel Products, Inc., 2500 E. 23rd St., Los Angeles 11, Calif.
 • Steel City Furnace Co., Springfield, Pa.
 Steel Products Engineering Co., Combustioneer Div., 1205 W. Columbia St., Springfield, Ohio.
 Steel & Tubes Div., Republic Steel Corp., 200 E. 131st St., Cleveland 8, Ohio.
 Steele Mfg. Co., 445 Winchester Ave., Ashland, Ky.
 Stefcos Steel Co., Heating Equipment Div., Michigan City, Ind.
 Steffens-Amberg Co., 262 Morris Av., Newark 3, N. J.
 Steinhurst & Sons, Inc., Emil, 612 South St., Utica 3, N. Y.
 Stephens-Adams Mfg. Co., Ridgeway Av., Aurora, Ill.
 Stephens Mfg. Co., 2507 East 15th St., Tulsa, Okla.
 Sterling Air Conditioning Corp., 519 Bond Bldg., Washington, D. C.
 Sterling Burner Corp., 14015 Hamilton Av., Detroit 3, Mich.
 Sterling Electric Motors, Inc., 5401 Anaheim-Telegraph Rd., Los Angeles 22, Calif.
 Sterling Engineering Co., 7402 Lansdowne Av., St. Louis 19, Mo.
 Sterling Foundry Co., P. O. Box 457, Sterling, Ill.
 Stewart Mfg. Co., Grove Ave., Cedar Grove, N. J.
 Stewart Mfg. Co., Inc., 610 Bloomfield Av., Bloomfield, N. J.
 Stewart Co., W. H., P. O. Box 4, Oklahoma City 1, Okla.
 Stic-Klip Mfg. Co., P. O. Box 83, Cambridge 40, Mass.
 Stoker-Lad Co., Division & I Sts., Tacoma 3, Wash.
 Stoker-Ola Mfg. Co., 2400 S. Adams St., Peoria, Ill.
 Stokol Stoker Co., Inc., 1600 Webster St., Dayton, Ohio.
 Stonewall Co., 54th & LaSalle St., Chicago, Ill.
 Stortz & Son, Inc., John, 210 Vine St., Philadelphia 6, Pa.
 Stossel & Sons Co., Carl, Front Royal, Va.
 Stow Mfg. Co., 445 State St., Binghamton, N. Y.
 Strandwitz & Co., Inc., W. J., Jefferson and Master St., Camden, N. J.
 Stratton & Terstegge Co., 1501 W. Main St., Louisville 1, Ky.
 Streine Tool & Mfg. Co., New Bremen, Ohio.
 Structural Slate Co., The, E. Main St., Pen Argyl, Pa.
 Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.
 Sudbury Laboratory, South Sudbury, Mass.
 Sullivan Valve & Engineering Co., 910 S. Arizona St., Butte, Mont.
 Sully Engineering, Ltd., 7416 Melrose Ave., Los Angeles 46, Calif.
 Sunbeau Heater Co., 3510 S. Hill St., Los Angeles 7, Calif.
 • Sundstrand Engineering Co., 1325 Seventh St., Rockford, Ill.
 • Sundstrand Machine Tool Co., Hydraulic Div., 2531 Eleventh St., Rockford, Ill.
 Sun-Fire Stoker Corp., 802 E. Eighth St., New Albany, Ind.
 Sunny Sue Burner Co., 108 Annetta St., Syracuse, N. Y.
 • Sun-Ray Burner Mfg. Corp., 139-24 Queens Blvd., Jamaica 2, N. Y.
 Sunshine Mantle Co., Chanute, Kans.
 Super Electric Products Corp., 1057 Summit Av., Jersey City 7, N. J.
 Superb O Mfg. Co., 1640 N. Indiana St., Los Angeles 33, Calif.
 Super Radiator Corp., 6714 Walker St., Minneapolis 16, Minn.
 Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.
 Superior Mfg. Co., Alexandria, Ind.
 Superior Mfg. Co., 3204 Penn Ave., Pittsburgh 1, Pa.
 Superior Pneumatic Div., Herbrand Tools, 4758 Warner Rd., Cleveland 25, Ohio.
 • Superior Products Co., 606 S. 14th St., Omaha 2, Nebr.
 Superior Safety Furnace Pipe Co., 5820 Forsythe Av., Detroit 2, Mich.
 Superior Steel Corp., Grant Bldg., Pittsburgh, Pa.
 Supreme Electric Products Corp., 194 Vassar St., Rochester 7, N. Y.
 Supreme Gas Burner Mfg. Co., 212 Oakwood Rd., Holly, Mich.
 Sure Comfort Furnace Co., 900 S. Des Plaines Ave., Forest Park, Ill.
 Surface Combustion Corp., 2375 Door St., Toledo 1, Ohio.
 Swaine Mfg. Co., Fred J., 1300 N. Seventh St., St. Louis 6, Mo.
 • Swartwout Co., 18615 Euclid Av., Cleveland 12, Ohio.
 Swift Electric Welder Co., 8095 Livernois Ave., Detroit 4, Mich.
 Swift Mfg. Co., Inc., 1455 E. Nine Mile Rd., Hazel Park, Mich.
 Swirling Heat Corp., 2818 N. Washington Blvd., Arlington, Va.
 • Syncromatic Corp., 1141 Tenth St., Watertown, Wis.
 Syntro Co., Homer City, Pa.

T

- Tagliabue Instruments Div., Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 3, N. J.
 Tamms Industries, Inc., 228 N. LaSalle St., Chicago 1, Ill.
 Tannewitz Works, 313 Front Av., N. W., Grand Rapids 2, Mich.
 Taylor Appliance & Mfg. Co., 339 W. Parent, Royal Oak, Mich.
 Taylor Instrument Cos., 95 Ames St., Rochester 1, N. Y.
 Taylor-Winfield Corp., 1052 Mahoning Av., N. W., Warren, Ohio.
 Technical Processes Div., Colonial Alloys Co., Ridge Av. & Crawford St., Philadelphia 29, Pa.
 Tecumseh Products Co., Tecumseh, Mich.
 Telechron, Inc., Ashland, Mass.
 Temco, Inc., 4104 Park Av., Nashville 9, Tenn.
 Tempo Products Co., 1900 Euclid Av., Cleveland 13, Ohio.
 Temtrol Mfg. Co., 7136 W. Jefferson Av., Detroit, Mich.
 Tennessee Coal, Iron & Railroad Co., Brown-Marx Bldg., Birmingham 2, Ala.
 Tennessee Products & Chemical Corp., American Natl. Bank Bldg., Nashville 3, Tenn.
 Tenney Engineering Inc., 26 Avenue B, Newark 3, N. J.
 Terra-Temp Co., Inc., Circle Bldg., Indianapolis 4, Ind.
 Tesco, Inc., 110 S. Norfolk, Tulsa, Okla.
 • Thatcher Furnace Co., Centre St., Garwood, N. J.
 Tharmac Co., 800 E. 108th St., Los Angeles 2, Calif.
 Thermador Electrical Mfg. Co., Inc., 5119 District Blvd., Los Angeles 22, Calif.
 Thermal Industries, Indio, Calif.
 Thermex Engineering Co., 400 N. Oakley Blvd., Chicago 12, Ill.
 Therminul Corp., 1603 Fultford St., Kalamazoo, Mich.
 Thermo-Aire Div., Evans Products Co., Plymouth, Mich.
 Thermoid Co., Whitehead Rd., Trenton 6, N. J.
 Thermo Oil Burner Co., 2103-D Westlake Av., Seattle 1, Wash.
 Thermomatic Corp., Church & Elm St., Willoughby, Ohio.
 Thermo-O-Disc, Inc., 127 Crouse St., Mansfield, Ohio.
 Thermo-Products, Inc., North Judson, Ind.
 Thomas Machine Mfg. Co., Etna P. O., Pittsburgh 23, Pa.
 Thompson Mfg. Co., A. F., 1040 Vernon St., Huntington, W. Va.
 Thompson & Co., 1085 Allegheny Av., Oakmont, Pa.
 Thompson & Son Co., Henry G., 100 James St., New Haven 3, Conn.
 Thomson Electric Welder Co., 161 Pleasant St., Lynn, Mass.
 • Thor Metal Products Co., Inc., Box 118, Eastwood Station, Syracuse 6, N. Y.
 • Thor Tool & Die Co., 3444 Morrison Ave., Oakland 2, Calif.
 Tierney Rotor Ventilator Co., 239 4th Ave., S., Minneapolis, Minn.
 Tiffin Art Metal Co., Box 807, Tiffin, Ohio.
 Tiffin Eaves Trough Clamp Co., 25 Miami St., Tiffin, Ohio.
 Timken Roller Bearing Co., 1835 Dueber Ave., S. W., Canton 6, Ohio.
 Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
 Tinit Mfg. Co., Inc., 1635-39 Platte St., Denver 2, Colo.
 Tinnerman Products, Inc., P. O. Box 6688, Cleveland 1, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Titan Valve & Mfg. Co., 9913 Elk Av., Cleveland, Ohio.
- Titeflex, Inc., 500 Frelinghuysen Av., Newark 5, Ohio.
- Titus Mfg. Corp., 113 E. Eighth St., Waterloo, Iowa.
- Tjernlund Mfg. Co., 2140 Kasota St., St. Paul 8, Minn.
- Toch Bros., Inc., 2600 Richmond Ter., Staten Island 3, N. Y.
- Toledo Heater Co., 25 S. St., Clair St., Toledo 4, Ohio.
- Topflight Tool Co., 116 E. Market St., York, Pa.
- Toridheet Div., Cleveland Steel Products Corp., Madison Ave. at W. 74th St., Cleveland 2, Ohio.
- Torit Mfg. Co., 292 Walnut St., St. Paul 2, Minn.
- Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
- Torq Electric Corp., 1002 Interstate St., Bedford, Ohio.
- Torrington Mfg. Co., 70 Franklin St., Torrington, Conn.
- Townsend Co., 206 River Rd., New Brighton, Pa.
- Trade-Wind Motorfans, Inc., 5725 S. Main St., Los Angeles 37, Calif.
- Trane Co., The, LaCrosse, Wis.
- Tremont Nail Co., Box 111, Wareham, Mass.
- Triad Products Corp., 5113 N. Clark St., Chicago 40, Ill.
- Triangle Mfg. Co., 338 Division St., Oshkosh, Wis.
- Triendl Products, Ltd., 17 E. 23rd St., Chicago 16, Ill.
- Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.
- Tri-Saw Corp., 6611 Clayton Rd., St. Louis 17, Mo.
- Tri-State Heating Supply Inc., 234-236 Murray St., Fort Wayne 5, Ind.
- Tropic-Air Stoker Co., 2017 Indiana Way, N. E., Canton 5, Ohio.
- Tropical Paint & Oil Co., 1244-86 W. 70th St., Cleveland, Ohio.
- Trumbull Electric Mfg. Co., Woodford Av., Plainville, Conn.
- Trufo Fan Co., 523 Main St., Harmony, Pa.
- Tru-Heat Co., 532 Miller Ave., Trenton 10, N. J.
- Tru-Mac Mfg. Co., 24 Woburn St., Reading, Mass.
- Truscon Laboratories, Caniff & Grand Trunk R. R., Detroit 11, Mich.
- Truscon Steel Co., Albert St., Youngstown 1, Ohio.
- Tubular Rivet & Stud Co., Wollaston 70, Mass.
- Turb-O-Tube Furnace, Inc., 106 Kingsley St., Buffalo, N. Y.
- Turco Products, Inc., P. O. Box 2649, Terminal Annex, Los Angeles 54, Calif.
- Turner & Seymour Mfg. Co., Lawton St., Torrington, Conn.
- Turner Brass Works, 821 Park Av., Sycamore, Ill.
- Tuthill Pump Co., 939 E. 95th St., Chicago 19, Ill.
- Tuttle & Bailey, Inc., Corbin Av., New Britain, Conn.
- Tweco Products Co., English at Ida, Wichita 1, Kansas.
- Twin City Gas Specialty Co., 710 W. 27th St., Minneapolis 8, Minn.
- Typhoon Air Conditioning Co., Inc., 794 Union St., Brooklyn 15, N. Y.

U

- Uehling Instrument Co., 473 Getty Av., Paterson 3, N. J.
- Unexcelled Chemical Corp., 350 5th Ave., New York 1, N. Y.
- Uniflex Metal Hose Corp., 52 Rubber Ave., Naugatuck, Conn.
- U-Ni-Matic Heating Systems, Inc., 1303 W. Slauson Av., Los Angeles 44, Calif.
- Union Mfg. Co., 297 Church St., New Britain, Conn.
- Union Mfg. Co., Inc., 6th & Washington Sts., Boyertown, Pa.
- Unique Mfg. Co., Inc., 221 W. Walton St., Chicago 10, Ill.
- United Air Heaters, Inc., Medical Arts Bldg., Seattle, Wash.
- United-Carr Fastener Corp., 31 Ames St., Cambridge 42, Mass.
- United Chromium, Inc., 100 E. 42nd St., New York 17, N. Y.
- United Cork Cos., Central Av. & N. J. Central R. R., Kearney, N. J.
- United Electric Controls Co., 69 "A" St., South Boston 27, Mass.
- United Gilsonite Laboratories, Scranton 1, Pa.
- United Industries, Box 449, Madison 1, Wis.
- United Machine Works, Inc., 1306 W. 58th St., Los Angeles 37, Calif.
- United Metal Hose Co., Inc., 36-01 43rd Av., Long Island City 1, N. Y.
- U. S. Air Conditioning Corp., Como Av. S. E. at 33rd, Minneapolis 14, Minn.
- U. S. Electrical Motors, Inc., 200 E. Slauson Av., Los Angeles 54, Calif.
- United States Electrical Tool Co., 1050 Findlay St., Cincinnati 14, Ohio.
- U. S. Expansion Bolt Co., Inc., P. O. Box 827, York, Pa.
- U. S. Gutta Percha Paint Co., 35 Dudley St., Providence 1, R. I.
- United States Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
- United States Gypsum Co., 300 W. Adams St., Chicago 6, Ill.
- U. S. Machine Corp., Lebanon, Ind.
- United States Mineral Wool Co., South Milwaukee, Wis.
- United States Radiator Corp., 500 Buhl Bldg., Detroit 31, Mich.

- United States Register Co., 324 E. Burnham St., Battle Creek, Mich.
- United States Steel Co., Sub. U. S. Steel Corp., Carnegie Bldg., Pittsburgh 30, Pa.
- United States Steel Supply Co., 1319 Wabansia Av., Chicago 90, Ill.
- U. S. Rock Wool Co., 40 S. Main, Salt Lake City 1, Utah.
- United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
- U. S. Stoneware Co., Akron, Ohio.
- United States Stove Co., Cedar Av., South Pittsburg, Tenn.
- United Wire & Supply Corp., 1497 Elmwood Ave., Providence 7, R. I.
- Universal Air Filter Corp., 332 W. Michigan St., Duluth 2, Minn.
- Universal Blower Co., 1090 S. Adams Av., Birmingham, Mich.
- Universal Cooler Div., Newport Steel Corp., 299 Joseph St., Marion, Ohio.
- Universal-Cyclops Steel Corp., Drawer 153, Bridgeville, Pa.
- Universal Metal Products, 2311 W. Orange, Alhambra, Calif.
- Universal Steel Fabricating Co., 570 Mercer, Seattle, Wash.
- Universal Welder Corp., 735 Carnegie Av., Cleveland 15, Ohio.
- Uno Ventilator Co., 565 Lincoln Av., Cliftondale Station, Saugus, Mass.
- Utica Products, Inc., Utica 4, N. Y.
- Utility Appliance Corp., 4851 S. Alameda St., Los Angeles 11, Calif.

V

- Vacuum Gas Appliances Div., Union Fork & Hoe Co., Rome, N. Y.
- Vacuum Gas Burner Corp., 132 N. 1st St., Olean, N. Y.
- Vallas, Lionel, 2850 W. Lake St., Chicago 12, Ill.
- Valley Electric Co., 4221 Forest Park, St. Louis, Mo.
- Vander Kaay Burner Co., 10304 Nelson Av., Cleveland, Ohio.
- Van Dorn Electric Tool Co., Towson 4, Md.
- Van Noorden Co., E. 100 Magazine St., Boston 19, Mass.
- Van-Packer Corp., 135 S. LaSalle St., Chicago 3, Ill.
- Van Products Co., 1509 G. D. Baldwin Bldg., Erie, Pa.
- Van's Gas Burner Service, 20420 Elkhardt, Detroit 24, Mich.
- Van Tuyl & Associates, J. E. B. of I E Bldg., Cleveland, Ohio.
- Vendor Slate Co., Inc., P. O. Box 204, Nazareth, Pa.
- Vent-O-Lite Co., 4230 W. Taylor St., Chicago 24, Ill.
- Vermont Structural Slate Co., Inc., P. O. Box 98, Fair Haven Vt.
- Verson Allsteel Press Co., 1351 E. 93rd St., Chicago 19, Ill.
- Vibrashock Div., Robinson Av., Teterboro, N. J.
- Vibration Eliminator Co., 10-28 47th Av., Long Island City 1, N. Y.
- Victor Electric Products, Inc., 2950 Robertson Road, Cincinnati 9, Ohio.
- Victor Oil Burner Mfg. Co., 250 Pleasant St., Hartford 3, Conn.
- Viking Air Conditioning Corp., 5601 Walworth Av., Cleveland 2, Ohio.
- Viking Mfg. Corp., 1747 Chester Av., Cleveland 14, Ohio.
- Viking Pump Co., 410 State St., Cedar Falls 1, Iowa.
- Viking Shear Co., 1063 W. 19th St., Erie, Pa.
- Vilter Mfg. Co., 2217 S. First St., Milwaukee 7, Wis.
- Vinco Products, 326 Bond St., Asbury Park, N. J.
- Vital Products Mfg. Co., 7500 Quincy Av., Cleveland 4, Ohio.
- Volcano Burner Corp., 3612 E. Tremont Av., New York 61, N. Y.
- Vol-U-Trol Co., Hwy. 61 & Kohlman Av., St. Paul 9, Minn.
- Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., 88 Holten St., Danvers, Mass.
- Vulcan Radiator Co., 26 Francis Ave., Hartford 6, Conn.
- Vyke Brake Co., 116 S. 27th St., Omaha, Nebr.

W

- W. G. B. Oil Clarifier, Inc., 139 Cornell, Kingston, N. Y.
- Wade Mfg. Co., Div. Woodruff & Edwards, Inc., Elgin, Ill.
- Wagner Awning & Mfg. Co., 2658 Scranton Rd., Cleveland 1, Ohio.
- Wagner Electric Corp., 6400 Plymouth Av., St. Louis 14, Mo.
- Wales-Strippit Corp., 345 Payne Ave., North Tonawanda, N. Y.
- Walker Mfg. & Sales Corp., 1711-1717 Penn St., St. Joseph 1, Mo.
- Wallace Co., William, Metalbestos Div., Belmont, Calif.
- Wall Colmonoy Corp., 19345 John R St., Detroit 3, Mich.
- Walsh Refractories Corp., 101 Ferry St., St. Louis 7, Mo.
- Waltham Oil Burner Co., 1214 Bennington St., E. Boston, Mass.
- Ward Industries, Inc., Edgar T., 820 S. Pulaski Rd., Chicago 24, Ill.
- Ward Heater Co., 1800 W. Washington Blvd., Los Angeles 7, Calif.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

- Ward Leonard Electric Co., 37 South St., Mt. Vernon, N. Y.
- Ward Machinery Co., 564 W. Washington Blvd., Chicago 6, Ill.
- Warner Ventilator Co., LeGrange, Ind.
- Wasco Flashing Co., 87 Fawcett St., Cambridge, Mass.
- Washington Steel Corp., Washington, Pa.
- Washington Stove Works, 3402 Smith St., Everett, Wash.
- Water Cooling Corp., 71 Nassau St., New York 7, N. Y.
- Water Cooling Equipment Corp., New Hampshire Av. & Weber Rd., Afton Sta., St. Louis 23, Mo.
- Waterman-Waterbury Co., 1122 Jackson St., N. E., Minneapolis 13, Minn.
- Waverly Heating Supply Co., 31 Union St., Boston 8, Mass.
- Wayne Home Equipment Co., Inc., 801 Glasgow Av., Fort Wayne 4, Ind.
- Weatherall Engineers, Inc., 387 Charles St., Providence 4, R. I.
- Weatherhead Co., 300 E. 131st St., Cleveland 8, Ohio.
- Webb Co., Jervis B., Joy Rd. & Alpina Av., Detroit, Mich.
- Webb Machine and Tool Co., Imperial, Pa.
- Webber Co., Inc., A. R., 424 Howard Ave., New Haven 11, Conn.
- Webber Engineering Corp., Board of Trade Bldg., Indianapolis, Ind.
- Webster Electric Co., DeKoven & Clark Sts., Racine, Wis.
- Webster Engineering Co., 419 W. 2nd St., Tulsa, Okla.
- Weirton Steel Co., P. O. Box 431, Weirton, W. Va.
- Weiss & Co., H., 113-115 Mercer St., New York, N. Y.
- Weksler Thermometer Corp., 52 W. Houston St., New York 12, N. Y.
- Weldex, Inc., 7326 McDonald Av., Detroit 10, Mich.
- Welding Machines Mfg. Co., 17325 Lamont Av., Detroit 12, Mich.
- Welding Sales & Engineering Co., 8750 Grinnell Av., Detroit 13, Mich.
- Weldit, Inc., 990 Oakman Blvd., Detroit 6, Mich.
- Wells Mfg. Corp., 1818 Wilson Av., Three Rivers, Mich.
- Werner Co., Inc., R. D., 295 Fifth Av., New York 16, N. Y.
- West Pacific Co., 1825 S. W. 6th Ave., Portland 1, Ore.
- Western Blower Co., 1800 Airport Way, Seattle 4, Wash.
- Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.
- Western Engineering & Mfg. Co., 1726 E. Washington Blvd., Los Angeles 21, Calif.
- Western Felt Works, 4029 Ogden Av., Chicago 23, Ill.
- Western Mineral Products Co., 1720 Madison St., N. E., Minneapolis 13, Minn.
- Western Precipitation Corp., 1016 W. 9th St., Los Angeles 15, Calif.
- Western Reserve Laboratories, 1438 St. Clair Av., Cleveland 14, Ohio.
- Western Rock Wool Corp., P. O. Box 545, Huntington, Ind.
- Western Thermal Equipment Co., 1701 W. Slauson Av., Los Angeles 44, Calif.
- Western Tool & Mfg. Co., Springfield, Ohio.
- Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.
- Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.
- Westinghouse Electric Corp., Sturtevant Div., 105 Readville St., Hyde Park, Boston 36, Mass.
- Weston Electrical Instrument Corp., 614 Frelinghuysen Av., Newark 5, N. J.
- Westwick & Son, Inc., John, Claude & Meeker Sts., Galena, Ill.
- West Wind Corp., 1800 Airport Way, Seattle 4, Wash.
- Wheelco Instruments Co., 847 W. Harrison St., Chicago 7, Ill.
- Wheeling Corrugating Co., Wheeling Steel Bldg., Wheeling, W. Va.
- Wheeling Furnace Corp., Martins Ferry, Ohio.
- Wheeling Steel Corp., Wheeling Steel Bldg., Wheeling, W. Va.
- Wheelock Co., Geo. F., 3017 S. Second Av., Birmingham 5, Ala.
- Whipple Sheet Metal Works, M. S. & L. H., 913 E. Shiwassee, Lansing 12, Mich.
- Whirlaway Motors, Tippecanoe City, Ohio.
- White & Sons, Inc., Wilfred O., 216 High St., Boston 10, Mass.
- White Mfg. Co., 2362 University Av., St. Paul, Minn.
- White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
- Whiteley Bearing Corp., 1238 S. Ashland Ave., Chicago 8, Ill.
- Whiting Corp., 157th St. & Lathrop Av., Harvey, Ill.
- Whiting Fire Power Products Corp., 1507 N. 1st St., Superior, Wis.
- Whitlock Mfg. Co., 100 South St., Hartford 10, Conn.
- Whitney Mfg. Co., W. A., 636 Race St., Rockford, Ill.
- Whitney Metal Tool Co., 91 Forbes St., Rockford, Ill.
- Whitty Co., Inc., 86 Western Av., Boston 34, Mass.
- Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., 500 Fifth Ave., New York 18, N. Y.
- Wiedemann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.
- Wilbur & Williams Co., 43 Leon St., Boston 13, Mass.
- Wilder Mfg. Co., 2300 S. Main St., Niles, Ohio.
- Wilder Products Co., 2422 Columbus Av., Springfield, Ohio.
- Will-Burt Co., Orrville, Ohio.
- Williams Oil-O-Matic Div., Eureka-Williams Corp., 1201 E. Bell, Bloomington, Ill.
- Williams Radiator Co., 1821 Flower St., Glendale 1, Calif.
- Williamson Heater Co., 4558 Marburg Av., Cincinnati 9, Ohio.
- Willis Steel Corp., 156 N. Academy St., Galesburg, Ill.
- Wilson Products, Inc., 248 Thorn St., Reading, Pa.
- Will-Weld Mfg. Co., Inc., 1525 Marcy St., Omaha 2, Nebr.
- Wilson & Co., Inc., 4100 S. Ashland Av., Chicago 9, Ill.
- Wilson, Inc., Grant, 316 S. LaSalle St., Suite 2254, Chicago 4, Ill.
- Wilson, K. R., 215 Main St., Buffalo 3, N. Y.
- Wilter, Inc., 5700 Detroit Av., Cleveland 2, Ohio.
- Wind-Way Fan & Ventilator Co., 527 St. Joseph St., New Orleans 12, La.
- Wing Mfg. Co., L. J., 154 W. 14th St., New York 11, N. Y.
- Winkler & Sons, Inc., E. A., 2337 N. 31st St., Milwaukee 10, Wis.
- Wiremold Co., Hartford 10, Conn.
- Wisconsin Oil Burner Co., 1134 Regent St., Madison 5, Wis.
- Wise Furnace Co., 100 Lincoln St., Akron 8, Ohio.
- Wiss & Sons Co., J., 11-45 Littleton Ave., Newark 7, N. J.
- Wodack Electric Tool Corp., 4627 W. Huron St., Chicago 44, Ill.
- Wolfe-Kote Co., 820 Penn Av., Sheboygan, Wis.
- Wolff and Co., Benjamin, 5800 S. Seeley Ave., Chicago 36, Ill.
- Wolverine Tube Div., Calumet and Hecla Consolidated Copper Co., 1850 Guardian Bldg., Detroit 26, Mich.
- Wood Conversion Co., First National Bank Bldg., St. Paul 1, Minn.
- Wood Steel Co., Alan, P. O. Box 112, Conshohocken, Pa.
- Wood Mfg. Co., Inc., John, Conshohocken, Pa.
- Wood's Sons Co., T. B., 1275 Fifth Av., Chambersburg, Pa.
- Woolley Engineering Co., 411 Curtis Bldg., Detroit 2, Mich.
- Worcester Brush & Scraper Co., Div. Mason Worcester Co., 38 Austin St., Worcester 2, Mass.
- Worcester Pressed Steel Co., 99 Barber Av., Worcester 6, Mass.
- Worsham Co., Inc., 7329 Lohmeyer, St. Louis 17, Mo.
- Worthington Pump & Machinery Corp., Air Conditioning & Refrigeration Div., Harrison, N. J.
- Worthington Pump & Machinery Corp., Harrison, N. J.
- Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.
- Wysong & Miles Co., 625 Fulton St., Greensboro, N. C.
- Wyzenbeck & Staff, Inc., 838 W. Hubbard St., Chicago 22, Ill.

X

- X-Pando Corp., 43-15 36th St., Long Island City 1, N. Y.
- XXth Century Heating & Ventilating Co., 96 Ira Av., Akron 1, Ohio.

Y

- Yale & Towne Mfg. Co., Philadelphia Div., Philadelphia 15, Pa.
- Yarnall-Waring Company, Chestnut Hill, Philadelphia 18, Pa.
- Yeomans Bros. Co., 1433 Dayton St., Chicago 22, Ill.
- Yoder Co., 5500 Walworth Av., Cleveland 2, Ohio.
- York Corrugating Co., Adams St. & W M RR., York, Pa.
- York Corp., Roosevelt Av., York, Pa.
- York Electric and Machine Co., 30-34 N. Penn St., York, Pa.
- York Electric Tool Co., S. Summer St. & Penn RR., York, Pa.
- York-Shipley, Inc., Jessop Place and P. R. R., York, Pa.
- Young & Berke Co., 1004-14 Hulbert Ave., Cincinnati 14, Ohio.
- Young Radiator Co., 709 S. Marquette St., Racine, Wis.
- Young Regulator Co., 5209 Euclid Av., Cleveland 3, Ohio.
- Youngstown Furnace Co., 627 Marshall St., Youngstown, Ohio.
- Youngstown Sheet & Tube Co., Stambaugh Bldg., Youngstown 1, Ohio.

Z

- Zeh & Hahnemann Co., 182-200 Vanderpool St., Newark 5, N. J.
- Zeigler-Harris Co., 2900 N. San Francisco Rd., Burbank, Calif.
- Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.
- Zick Sheet Metal Works, 25150 W. Warren Ave., Dearborn, Mich.
- Zink Co., John, 4401 S. Peoria St., Tulsa 1, Okla.
- Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.

• Advertisement in this issue. See Index to Advertisers, page 104-D.

INDEX TO ADVERTISERS

A & A Register Co., The	273	Forest City Foundries Co., Inc.	211	Owens-Corning Fiberglass Corp.	87
Accurate Sheet Metal & Mfg. Works ..	281	Frey Co., Frank P.	285	Patten Co., J. V.	59
Adams Co., The	281			Peck, Stow & Wilcox Co.	259
Aerofin Corp.	271			Peerless Electric Co.	204
Air Conditioning Products Co.	266			Peerless Foundry Co.	215
Air Controls, Inc.	254			Penn Electric Switch Co.	74
Air Control Prod., Inc. Inside Front Cover				Perfection Stove Co.	24 & 25
Airfan Eng'g. Co.	280			Perflex Corp.	48
Airtemp Div. of Chrysler Corp.	228			Petersen Mfg. Co.	279
A-J Mfg. Co.	227			Philadelphia Rust-Proof Co.	266
A-P Controls Corp.	96			Pioneer Tool Co.	284
Ajax Furnace Fitting Co.	272			Potts-Farrington Co.	284
Alford Div., Reflectal Corp.	264			Premier Furnace Co.	19
Allen Co., Inc., L. B.	194				
Altimetal Screw Products Co.	272				
Alton Mfg. Co.	251				
American Air Filter Co., The	81				
American Furnace Co.	226				
American Machine Products	268				
American Radiator & Standard Sanitary Corp.	36				
Anchor Div., Stratton & Terstegge Co.	73				
Anemostat Corp. of America	275				
Anthracite Institute	221				
Appton Co., Oliver	160				
Armstrong Co., The	38				
Armstrong Furnace Co.	83				
Atlas Mfg. Co.	237				
Auer Register Co.	37				
Automatic Burner Corp.	219				
Automatic Humidifier Co.	78				
Bacharach Industrial Instrument Co.	277				
Barber Gas Burner Co., The	241				
Barth Mfg. Co.	267				
Bayley Blower Co.	84				
Berger Bros. Co.	280				
Besco Mfg. Co.	284				
Bethlehem Steel Co.	218				
Beverly Shear Co.	265				
Bishop & Babcock Mfg. Co., Inc.	252				
Boston Machine Works Co.	272				
Brauer Supply Mfg. Co., A. G.	76				
Brundage Co.	216				
Bryant Heater	222				
Burke Engineering Co.	220				
Calculator Specialties Co.	285				
Central-West Machinery Co., Inc.	284				
Century Electric Co.	30 & 31				
Century Engineering Corp.	62				
Champion Furnace Pipe Co.	261				
Champion Tool Co.	288				
Char-Gale Mfg. Co.	32 & 33				
Chevrolet Motor Div., General Motors Corp.	191				
Cincinnati Elbow Co., The	260				
Clarage Fan Co.	44 & 45				
Cleveland Humidifier Co.	248				
Climatemaker Slide Rule Service	281				
Coleman Co., Inc., The	118 & 279				
Conco Engineering Works	70 & 71				
Condensation Engineering Corp.	233				
Continental Steel Corp.	275				
Corlett-Turner Co.	275				
Crescent Tool Co.	18				
Crise Controls Div., Acro Mfg. Co.	214				
Dahlstrom Machine Works	273				
Delco Appliance Div., General Motors Corp.	86				
Delco Products Div., General Motors Corp.	92				
Des Moines Furnace & Stove Repair Co.	273				
Diamond Mfg. Co.	280				
Dickman Co., Ferdinand	273				
Dole Valve Co.	235				
Dowagiac Steel Furnace Co.	265				
Doyle Vacuum Cleaner Co.	254 & 283				
Dravo Corp.	192 & 193				
Dreis & Krump Mfg. Co.	21				
Dustron Co.	212				
Economy Gas Furnace Mfg. Co.	61				
Electrol Burner Mfg. Co., Inc.	217				
Elgo Shutter & Mfg. Co.	21				
Emerson Elec. Mfg. Co.	210				
Enderle Inc., Ltd., Frank X.	278				
Fallington Mfg. Co.	284				
Famous Furnace Co.	271				
Federated Metals Division	64				
Field Control Div., H. D. Conkey & Co.	13				
Follansbee Steel Corp.	244 & 245				
Galvan Mfg. Co.	262				
General Electric Co.	229 & 232				
General Filters, Inc.	232				
Gerett Corp., M. A.	198				
Gray and Dudley Co.	90				
Gray Metal Products, Inc.	250				
Gustin-Bacon Mfg. Co.	42 & 43				
Hall-Neal Furnace Co.	52 & 53				
Hammel Radiator Engrg. Co.	274				
Handley-Brown Heater Co.	263				
Hart & Cooley Mfg. Co.	16, 17 & 270				
Henderson Furnace & Mfg. Co.	268				
Henry Furnace Co., The	46 & 47				
Hess Co., The	277				
Hess-Snyder Corp.	238				
Hossfeld Mfg. Co.	41				
Hussey & Co., C. G.	253				
Independent Register Co.	68				
Inland Steel Products Co.	98				
Interstate Machinery Co., Inc.	285				
International Oil Burner Co.	253				
Johnson Gas Appliance Co.	274				
Kaustine Co., Inc.	209				
Kent Company, Inc., The	275				
Kingston-Conley Div., Hoover Co., The ..	60				
Killam Gas Burner Co.	276				
Kirk & Blum Mfg. Co.	276				
Knights Co., James	276				
Ko-Z-Aire, Inc.	224 & 225				
Krenno-Stamm Mfg. Co. (America) Inc.	260				
Krueger Sentry Gauge Co.	8				
Lau Blower Co.	82				
Leisur-Maid Mfg. Corp.	248				
Lewow, David	275				
Liberty Combustion Corp.	230				
Lima Register Company	223				
Little Giant Vaporizer Co.	277				
Livingston, Inc.	251				
Lockformer Co.	7				
Made-Rite Co., Inc.	200				
Maid-O'-Mist, Inc.	93				
Majestic Co.	278				
Maplewood Machinery Co.	280				
Marshalltown Mfg. Co.	250				
Marvin Mfg. Co.	274				
May-Fieberger Co.	246				
Mayflower Air Conditioners, Inc.	20				
McLary Systems	252				
Mercoid Corp., The	263				
Metromatic Mfg. Co.	231				
Meyer & Bro. Co., P.	208				
Meyer Furnace Co.	251, 281 & Inside Back Cover				
Meyer Sheet Metal Machinery Co.	279				
Midco Register Corp.	270				
Mid-States Welder Mfg. Co.	248				
Miller & Deing	280				
Miller Products Co.	278				
Milton Equipment Co.	282				
Minneapolis-Honeywell Regulator Co.	243				
Moncrief Furnace Co.	279				
Morey, Dan	281				
Morrison Products, Inc.	207				
Morris Steel Products, Inc.	75				
Mueller Furnace Co., L. J.	14 & 15				
National Heater Co.	249				
National Lock Company	246				
National Metal Fabricators	271				
National Super Service Co.	282				
Niagara Machine & Tool Works	37				
Norge Heat Div., Borg Warner Corp.	85				
Northwestern Stove Repair Co.	261				
Nu-Way Corp.	11				
Obdyke Inc., Benjamin P.	264				
Ohio Valley Hardware & Roofing Co.	267				
Oil Heat Institute	206				
Olsen Mfg. Co., C. A.	22 & 23				
Olsen & Company, Arthur A.	237				
Patten Co., J. V.	59				
Peck, Stow & Wilcox Co.	259				
Peerless Electric Co.	204				
Peerless Foundry Co.	215				
Penn Electric Switch Co.	74				
Perfection Stove Co.	24 & 25				
Perflex Corp.	48				
Petersen Mfg. Co.	279				
Philadelphia Rust-Proof Co.	266				
Pioneer Tool Co.	284				
Potts-Farrington Co.	284				
Premier Furnace Co.	19				
Quiet Automatic Burner Corp.	205				
R C S Tool Sales Corp.	54 & 55				
Randall Graphite Bearings, Inc.	12				
Reiner & Campbell Co., Inc.	283				
Reinhard Bros. Co.	289				
Research Products Corp. Outside Back Cover					
Revere Copper & Brass, Inc.	177				
Rex Roto Corp.	278				
Rheem Mfg. Co.	135-138				
Richmond Radiator Co.	101				
Rochester Mfg. Co., Inc.	80				
Rock Island Register Co.	259				
Round Oak Co., Inc.	39 & 40				
Royal Heaters, Inc.	28 & 29				
Rybolt Heater Co.	102				
Ryerson & Son, Inc., Joseph T.	102				
San Angelo Fdry. & Machine Co.	266				
Schaefer Brush Mfg. Co.	197				
Schwab Furnace Co.	276				
Security Mfg. Co.	79				
Sequola Mfg. Co.	201				
Severson Mfg. & Supply Co.	262				
Siemon & Co.	72				
Skuttite Mfg. Co.	65				
Smith, R. E.	258				
Standard Stamping & Perforating Co.	269				
Steel City Furnace, Inc.	236				
Stewart-Warner	199				
Sundstrand Engrg. Co.	10				
Sundstrand Hydraulic Div., Sundstrand Machine Tool Co.	95				
Sun-Ray Burner Mfg. Co.	256				
Superior Products Co.	270				
Swartwout Co.	66				
Synromatic Corp.	50 & 51				
Thatcher Furnace Co.	77				
Thor Metal Prod. Co.	282				
Thor Tool & Die Co.	281				
Torridheat Div., Cleveland Steel Products Corp.	67				
Triangle Mfg. Co.	271				
Turner Brass Works, The	253				
Tuttle & Bailey, Inc.	247				
Union Mfg. Co.	277				
United States Register Co.	26 & 27				
United States Steel Co. Division Eureka	61				
United States Steel Supply Co.	94				
Van Packer Corp.	5				
Viking Air Conditioning Corp.	96				
Vyke Brake Co.	284				
Walker Mfg. & Sales Corp.	97				
Walsh & Co., William	49				
Walsh Refractories Corp.	252				
Ward Machinery Co.	276				
Waterman-Waterbury Co.	135-138				
Webster Elec. Co.	91 & 92				
Western Engrg. Co.	256				
Whitney Mfg. Co., W. A.	58				
Whitney Metal Tool Co.	286				
Williams Oil-Q-Matic Division Eureka	69				
Williams Corp.	34 & 35				
Willis Steel Corp.	283				
Wilson & Co., Inc.	249				
Wilson, Inc., Grant	257				
Wise Furnace Co.	195				
Wodack Electric Tool Co.	284				
Wolf & Co., Benjamin	178				
Wyong & Miles Co.	178				
Youngstown Furnace Co.	255				
Zink Co., John	3				



Your WEIR-MEYER representative says—

"You are King

when you sell

WEIR-MEYER
FURNACES • AIR CONDITIONERS

"A Weir-Meyer dealer is a 'preferred person'. Customers recognize you, competitors respect you and the Meyer Furnace Company sees that your dealership is profitable and enjoyable. You may qualify for exclusive rights to a Weir-Meyer dealership in your territory. Send the coupon below for details."

THE MEYER FURNACE COMPANY
General Offices: Peoria 2, Illinois



WEIR-MEYER MEANS *Modern* HEAT

Manufacturers of Weir & Meyer Furnaces • Air Conditioners for Gas—Oil—Coal • Factories: Peoria and Peru, Illinois

"meet some of the
members of your
'COURT'"



To establish and supervise policies and plans for you and your territory that enable you to *make* and *keep* good profits.

To direct WEIR-MEYER factory sales representatives and distributors so that they will be of the most possible help to you. ...

RUSS QUIMBY, Sales Manager



To see that your orders are delivered as promised.

HAROLD WALKER
Assistant Sales Manager



To design and produce equipment that's easy to install and trouble-free.

RAY QUALLEY Chief Engineer



To help you plan installation and application.

JOHN BOLAND
Assistant Chief Engineer



To supply you with tested, workable advertising and sales tools

CHUCK RAPER
Advertising Manager

MEYER FURNACE CO.
DEPT. A-12, Peoria 2, Ill.

Please rush information on Weir-Meyer Dealerships.

Name _____

Street _____

City _____

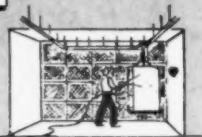
State _____

THERE'S AN **RP**
Air Filter for:

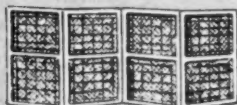
FORCED WARM
AIR FURNACES



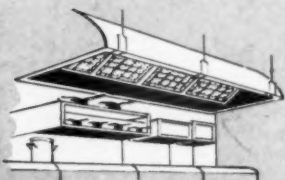
UNIT
AIR CONDITIONERS



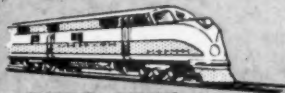
PAINT SPRAY BOOTH



CENTRAL SYSTEM
FILTER BANKS



KITCHEN GREASE CANOPIES



ENGINE INTAKE



SPECIAL
PURPOSE
DESIGNS

*Tell us your
Air Filter
needs and
specifications*



Whatever Your Air Filter Needs — You'll Find Them In The **RP CATALOG**

YES, you can answer every customer Panel Air Filter requirement with the R-P filter line . . . and help yourself to handsome profits, too!

If you have a filter service program, you can cut costs in half with R-P Fiber Self Seal filters with the "Save the Frame" feature.

Any of your customers who want to handle their own filter service will find the E Z Klean . . . the washable, reusable filter the ideal solution.

For additional sheet metal work . . . R-P Grease Filters for kitchen canopies will promote exceptional increase in volume.

And also . . . in the R-P line are Industrial Air Filters. Paint Arrestors, Heavy Duty Engine Intake Filters and special purpose designs of all types.

Yes, there's an R-P filter for every purpose . . . and your R-P Catalog provides complete, handy information on sizes and specifications. Write for your copy . . . and let the complete R-P line show the way to extra volume, extra profits.

Write **RESEARCH PRODUCTS CORP.**, Madison, Wis., U. S. A.

RP

... PRODUCTS OF RESEARCH

WASHABLE AND REPLACEMENT AIR FILTERS • GREASE FILTERS
EVAPORATIVE COOLER MATERIALS